

LIBRARY  
OF THE  
UNIVERSITY  
OF ILLINOIS

C  
S087dH  
1905/06-  
1909/10



















37d H  
5-06

**THE  
SOUTH DAKOTA  
AGRICULTURAL  
COLLEGE**



**ANNUAL CATALOGUE  
1905—1906**





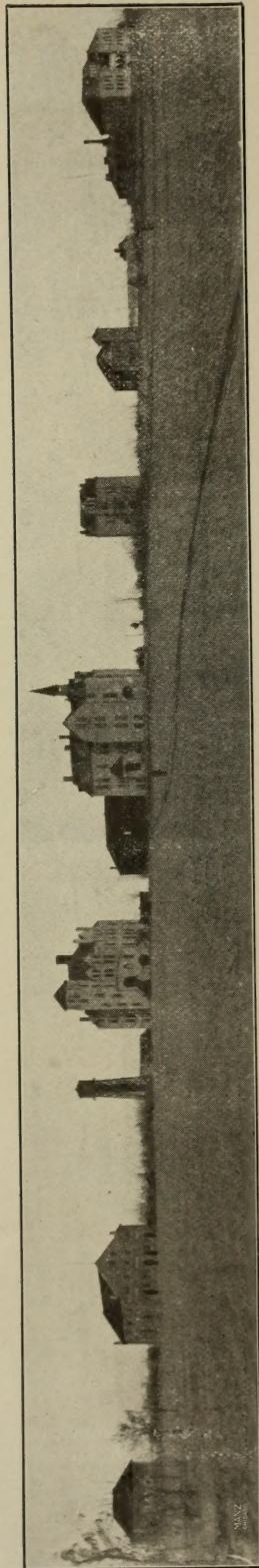


UNIVERSITY OF ILLINOIS

South Dakota  
Agricultural College  
Annual Catalogue  
1905-1906

WITH ANNOUNCEMENTS  
FOR 1906-1907

PUBLISHED BY THE COLLEGE  
BROOKINGS, SOUTH DAKOTA, 1906



PANORAMIC VIEW OF SOUTH DAKOTA AGRICULTURAL COLLEGE CAMPUS



50 374 H  
1905/1906-1906/1907

## Calendar For 1906-7

---

1906. FALL TERM, THIRTEEN WEEKS.

September 24-25—Entrance Examinations and Registration.  
September 26—Work of Fall Term Begins.  
October 6—Faculty Reception to Students.  
November 29-30—Thanksgiving Recess.  
December 21—Fall Term Closes.

1907. WINTER TERM, ELEVEN WEEKS AND ONE DAY.

January 2—Entrance Examinations and Registration.  
January 3—Work of Winter Term Begins.  
January 12—Faculty Reception to Students.  
March 20—Winter Term Closes.

1907. SPRING TERM, ELEVEN WEEKS AND FOUR DAYS.

March 25—Work of Spring Term Begins.  
June 13—Work of Spring Term Ends.  
June 13—

10:30 a. m., Commencement Exercises.

1907. FALL TERM.

September 23—Fall Term Begins.  
December 20—Fall Term Ends.

---

## Calendar of Short Courses in 1907

---

January 2 to February 15—Short Course in Agriculture.  
January 2 to March 20—Course in Dairy Science. (Butter making.)  
January 2 to March 20—Public School Drawing.  
January 2 to March 20—Short Course in Domestic Science.  
January 2 to March 20—Horticulture. (Nurserymen's Course)  
January 2 to June 13—Practical Steam Engineering.

## Faculty

---

ROBERT LINCOLN SLAGLE, A. M., PH. D., PRESIDENT

HUBERT BERTON MATHEWS, M. S., VICE-PRESIDENT

Professor of Physics and Electrical Engineering

JAMES HENRY SHEPARD, B. S.

Professor of Chemistry

HALVOR CHRISTIAN SOLBERG, M. E.

Professor of Mechanical and Steam Engineering

BOWER THOMAS WHITEHEAD, M. S., PH. C.

Professor of Pharmacy

NIELS EBBESEN HANSEN, M. S.

Professor of Horticulture and Forestry

GEORGE LINCOLN BROWN, PH. D.

Professor of Mathematics and Astronomy

EDWARD LOCKHART MOORE, B. S., D. V. S.

Professor of Zoology and Veterinary Medicine

ARTHUR BOONE CROSIER

Professor of Stenography and Commercial Science

JOHN HERSEY WHEELER, A. B.

Professor of Modern Languages

ELMER KENDALL EYERLY, A. M.

Professor of English Literature

ADA BERTHA CALDWELL

Professor of Industrial Art

ROBERT BLACKWOOD FORSEE, PE. P.

Principal of Preparatory Department

ALBERT SPENCER HARDING, A. M.

Professor of History and Political Science

JAMES WILBUR WILSON, M. S. A.

Professor of Agriculture and Animal Husbandry

AUSTIN BENJAMIN CRANE, M. S.

Professor of Civil and Agricultural Engineering

RUTH A. WARDALL, A. B.

Preceptress and Professor of Domestic Science

WILLIAM ARCHIE WHEELER, M. S.

Professor of Botany and Entomology

RUFUS BUEL McCLENON, A. M.

Professor of Pedagogy and Latin

GEORGE D. GUYER, CAPTAIN 16th INFANTRY, U. S. A.

Professor of Military Science and Tactics

WILLIAM H. POWERS, M. A.

Librarian and Associate Professor of English

WM. J. JUNEAU, A. B.

Director of Athletics

ALBERT H. WHEATON

Instructor in Dairy Science

HOWARD HARTMANN HOY, M. S.

Instructor in Physics and Electrical Engineering

JOHN PARMELEE MANN

Instructor in Vocal Music and Stringed Instruments, and Band Leader

\*NINA WESTON

Instructor in Instrumental Music

MAUD VAUGHAN PETERS

Instructor in Elocution and Physical Culture

MARY EDITH THORNBUR, B. S.

Assistant in Domestic Science

HARRY G. SKINNER, B. S. A.

Assistant in Agriculture and Animal Husbandry

FRANK A. NORTON, B. S., PH. G.

Assistant in Chemistry

JOHN NELSON, B. S.

Assistant in Mathematics

JOHN S. COLE, B. S.

Assistant in Agronomy

MAUDE GODDARD

Assistant in Art and Preparatory Departments

OLE N. TROOEN, M. S.

Assistant in Mechanical and Steam Engineering

SHIRLEY B. MILLER, M. A.

Assistant in Zoology and Bacteriology

GEORGE ROCKWELL WESTCOTT, B. S.

Registrar and Assistant in Wood Shops

CHRISTIAN N. TRYGSTAD, A. B.

Assistant in Latin and German

†MRS. MINNIE KELLY

Instructor in Instrumental Music

ROY O. WILSON

Secretary to the President

---

\*Granted Leave of Absence During Spring Term

†Appointed to Fill Vacancy Caused by Absence of Miss Weston



## Committees

---

The Faculty meets regularly every Monday during term time, at 4:15 p. m. To facilitate the work and aid the Executive in disposing of minor questions, the following committees are appointed for the current year:

*Committee on Classification and Course of Study*—Slagle, Mathews, Wilson, Whitehead, Brown, Hansen, Moore, Wardall.

*Department* — Brown, Mathews, J. H. Wheeler, Eyerly, Powers, Wilson, Whitehead, Harding, Crane, Guyer.

*Athletics*—J. H. Wheeler, Eyerly, Mathews, Guyer, W. A. Wheeler, Wilson, Powers, Juneau.

*Library*—Harding, Eyerly, Powers, Shepard, Forsee.

*Literary*—Eyerly, J. H. Wheeler, Caldwell, Weston.

*Living Affairs*—Solberg, Forsee, McClenon, Wardall, Wheaton, Thornber, Nelson.

*Social Affairs*—Crosier, Hansen, Caldwell, Mann, Hoy, Weston, Wardall, Goddard, Guyer.

*Student Labor and Grounds*—Hansen, Wilson, Solberg, Crane.

*Student Organizations and Publications*—Harding, Solberg, Crane, Hoy, Powers.

---

## Regents of Education

HON. IVAN W. GOODNER	Pierre
HON. R. M. SLOCUM	Herreid
HON. F. A. SPAFFORD	Flandreau
HON. A. W. BURTT	Huron
HON. M. F. GREELEY	Gary

---

## Officers of the Board

HON. IVAN W. GOODNER	President
HON. I. D. ALDRICH	Secretary
HON. C. B. COLLINS (State Treasurer)	Treasurer

---

## Regents' Committee For the College

HON. R. M. SLOCUM	HON. F. A. SPAFFORD
MR. R. A. LARSON,	
Secretary and Accountant, Brookings, S. D.	

## Station Council and Meetings

---

The Station Council is composed of the Regents' Committee for the College, the President of the College and heads of staff divisions.

This Council meets regularly throughout the year on the first Wednesday of each month at 4:15 p. m., and at such other times as the Director may designate.

---

## Agricultural Experiment Station Staff

---

James W. Wilson, Director	Animal Husbandry
N. E. Hansen, Vice-Director	Horticulturist
James H. Shepard	Chemist
W. A. Wheeler	Botanist and Entomologist
E. L. Moore	Veterinarian

---

Wm. West	Foreman Station Farm
H. G. Skinner	Assistant in Animal Husbandry
F. A. Norton	Assistant in Chemistry
Sylvester Baltz	Superintendent Highmore Sub-Station
F. C. Stoltenberg	Gardener and Florist
R. A. Larson	Secretary and Accountant
T. B. Kelley	Station Stenographer

## Other Regular Employees

---

Fred Betkey	Engineer
Arne Larson	Fireman
George E. Purdy	Janitor and Carpenter
Joseph D. Grover	Assistant Janitor
H. C. Hanson	Farm Teamster
William Wood	Horticultural Teamster
M. J. McCormick	Herdsman

---

## Tutors

---

Tutors for the several departments will be appointed and published at the opening of the new college year.

All students absent from regular college exercises will be expected to arrange with a tutor for making up omitted work.





THE CENTRAL BUILDING

## General Information

---

### A—Historical

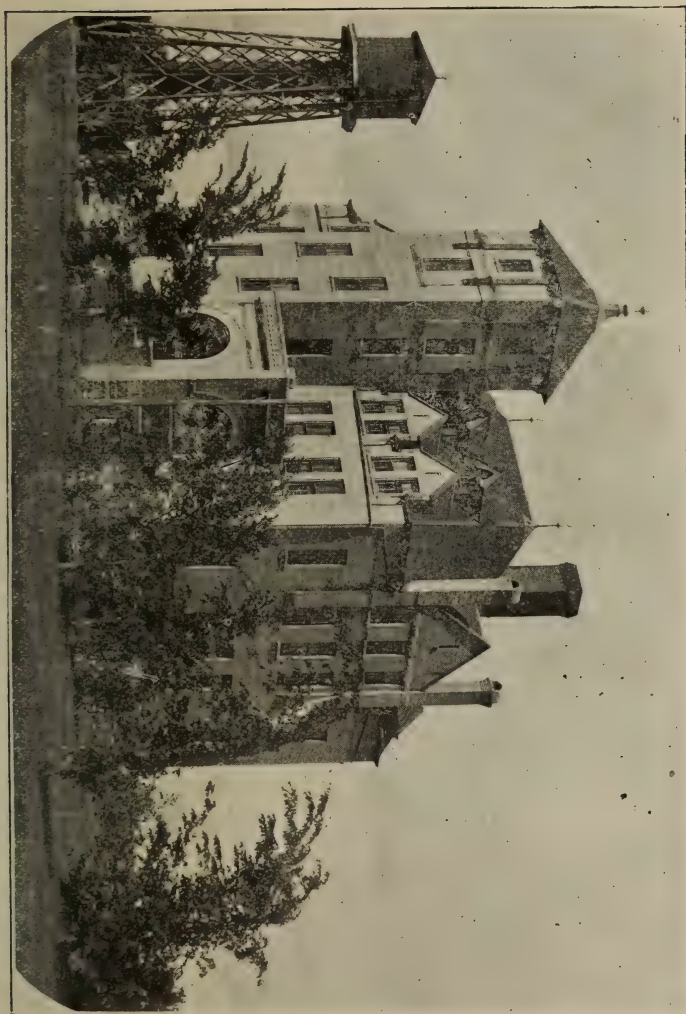
1. **ESTABLISHMENT.**—An act of Congress Approved July 2, 1863, gave to each state 30,000 acres of public lands for each representative in Congress towards "the endowment, support and maintenance of at least one college where the leading object shall be, without excluding other scientific and classical studies, and including military tactics, to teach such branches of learning as are related to agriculture and the mechanic arts." In compliance with this act the territorial legislature of 1881 passed an act establishing an agricultural college at Brookings in the territory of Dakota.

The legislature of 1883 provided for the erection of the first building. This building, now known as the Central building, was built in 1884.

Upon the division of the territory of Dakota into the states of North and South Dakota when admitted into the Union in 1889, the Agricultural and Mechanical College of Dakota became known as the South Dakota Agricultural College.

2. **PURPOSE.**—The college is devoted to advancing the interests of practical education, its purpose being to give men and women such training as will best fit them for the active duties of life, whether it be in the fields, the shops, the house, or in the class or counting rooms.

In the act of the legislature establishing the institution it was designated "The Agricultural and Mechanical College," and in the Congressional act these colleges were spoken of as "Agricultural and Mechanic Arts." While the School is popularly called the "Agricultural College," the mere precedence of the term does not make it more agricultural than mechanical. Although the work of the institution is largely scientific, it is of such diversified character that the student can pursue work along almost any line which his tastes dictate. The aim of all the work offered is to fit young people to occupy ably any position they may be



THE NORTH BUILDING



called upon to fill; and to make better and more intelligent citizens of them.

A constant effort is made to reach the masses of the people in the state and interest them in the applications of science to industrial pursuits, and in the more general improvement of their home life and every day activities.

3. LOCATION.—The College is located in the east central part of the state, upon an eminence one mile from the business center of the city of Brookings, and four miles from the Big Sioux River.

Brookings has a population of about three thousand five hundred thrifty, intelligent and hospitable people. Its streets are lined with trees and there are very few houses where there are not well kept lawns, upon which are growing trees, beautiful flowering shrubs and plants. It has often been called the "City of Homes."

It is a city of clean morals. No saloon has been allowed within its limits for several years. In the spring election of 1898 the proposition to allow saloons within the city limits was defeated by a vote of three to one; and in the general election of 1896 Brookings county was the banner county of the state in its vote against allowing intoxicating liquors to be sold in the state.

It is situated on the Central Dakota Division of the Chicago & Northwestern railway, three miles from its junction with the Watertown branch of the same road which makes connections with the main line at this point.

4. SOURCES OF INCOME.—By the Congressional act under which South Dakota became a state, one hundred and sixty thousand acres of land were set aside as an endowment for the South Dakota Agricultural College. These lands are all selected—very little has as yet been sold. A small amount is now being received yearly as rental from the selected lands.

No school lands can be sold for less than ten dollars per acre, so that these lands, when sold, will probably yield an endowment of two million dollars, the interest from which will be sufficient for the needs of the College.

The "Morrill Act" passed by Congress in 1890 provides a yearly appropriation for "the more complete endowment

and support of Colleges for the benefit of Agriculture and Mechanic Arts." Under this act the College, at present, receives from the general government the sum of \$25,000 per annum.

The "Hatch Act" passed by Congress provides for the establishment of Agricultural Experiment Stations in connection with Agricultural Colleges, and allows \$15,000 per year for the maintenance of the same.

The "Adams Act" passed by Congress and signed by the President, March 20th, 1906, increases the annual appropriation to Agricultural Experiment Stations. This act carries an appropriation of \$5,000 for the first year and increases \$2,000 each year until it reaches \$15,000 per annum. The first appropriation under this act becomes available July 1st, 1906.

The state legislature makes biennial appropriations for the support of the College. At its last session about *ninety thousand dollars* were appropriated.

5. GENERAL POLICY.—It is the policy of the institution to make itself in truth a part of the common school system, first, by continuing the work of the young people from the point in their education where the lower school stops, thus giving them an opportunity to become liberally and practically educated within the boundaries of their own state; second, by assisting in the training of public school teachers, especially in the various sciences.

6. EXPERIMENT STATION.—This department is organized under the Hatch act of Congress which appropriates fifteen thousand dollars from the United States treasury each year for its maintenance.

"It shall be the object and duty of said experiment stations to conduct original researches, and verify experiments on the physiology of plants and animals,"—enumerating some twenty other lines of research,—“and such other experiments bearing directly on the Agricultural industry of the United States as may in each case be deemed advisable, having due regard to the varying conditions and needs of the respective states. To aid in acquiring and diffusing among the people of the United States useful and practical information on the subjects connected with agriculture.” The



EXPERIMENT STATION BUILDING



South Dakota station conducts its investigations principally upon the following lines: Live stock, soil, field experiments, greenhouse work, trees and small fruits, chemistry of plant growth and foods, and economic botany, entomology and zoology.

In planning the work of the station the main object sought is to assist the agricultural interests of the state. Education is derived from this in two ways; first, from the student's observation of the actual work; second, by reading the accounts and results of the work which are published in the form of bulletins and are available to anyone applying.

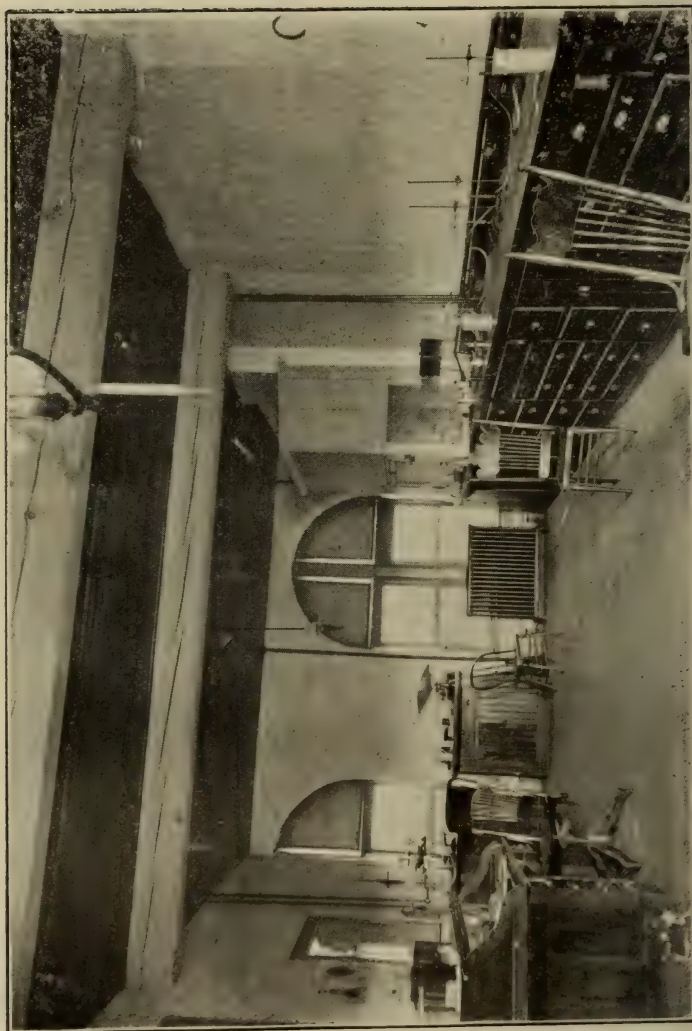
---

### B - Equipment

1. **CAMPUS.**—The College campus of thirty acres is beautifully located on an eminence within the corporate limits of Brookings. Under the charge of the horticultural department the campus, ornamented with choice and tasteful varieties of trees and shrubs and laid out with necessary drives and walks is a good example of landscape gardening. Adjoining on the rear is a fifty acre plat which is devoted to horticultural gardens and the United States forestry experiments. This portion is laid out regularly in suitably sized plats with longitudinal streets at appropriate distances apart, thus giving a beautiful and symmetrical effect to the observer from the College buildings.

2. **BUILDINGS.**—The oldest building on the campus, a three-story brick structure known as the "Central Building," was completed in 1885, and is devoted to administrative and instructional purposes. The "Station Building," also a three-story building, is occupied principally by the experiment station laboratories. The "North Building" is a four-story brick building, the first floor of which is used as a chapel room, the two floors above furnishing quarters for the Art and Domestic Science departments. The "Chemistry and Pharmacy Building," the "Drill Hall" and the "Creamery" are all two-story buildings of modern design, and well equipped with apparatus.

The "Engineering and Physics Building," the "Plant Breeding Building" and the "Greenhouse," by their substantial and imposing appearance, add much to the beauty



EXPERIMENT STATION CHEMICAL LABORATORY

of the campus, and furnish ample room for the departments which occupy them. Class rooms and fine laboratories are provided in the barn for work in soil physics, agriculture and allied subjects.

A modern central heating plant occupies a fine brick structure back of the main buildings.

3. FARM.—Set apart as the College farm is a tract of four hundred and eighty acres near the campus, about sixty acres of which are used by the Agricultural Experiment Station as an experimental farm. Here the field experiments with field crops, seed germination, and soil preparation are conducted, and the student electing it can witness and actually participate in this scientific work. The remainder of the farm is used as a model stock and dairy farm under the direction of the professor of animal husbandry. Practical work and experiments involving the best farming practices for this region are given the students.

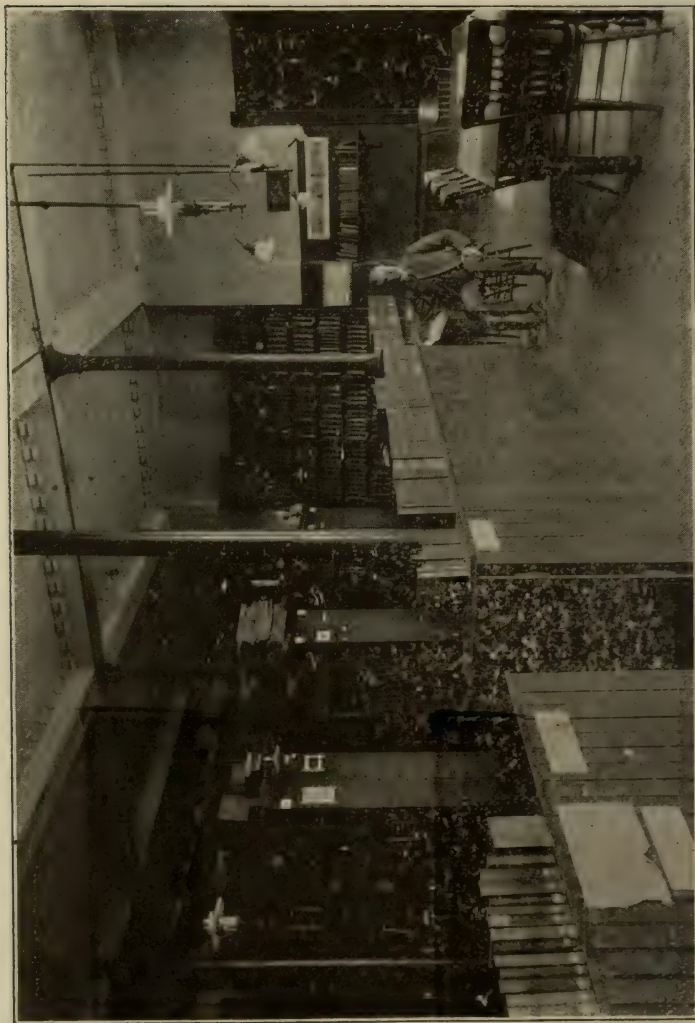
4. DORMITORIES.—Originally the institution provided dormitories for both sexes. But the attendance has increased so much more rapidly than the class room facilities, that it has been necessary to convert the dormitories into rooms for the departments, so that now no such living arrangements in connection with the College are provided.

5. LABORATORIES.—The work of the institution being so largely scientific in nature, well-fitted laboratories have been provided in all those departments where their use is made necessary by the most modern and approved educational methods. The farm with its equipment together with the horticultural gardens and the greenhouse serves as a laboratory for the departments of Horticulture and Agriculture.

6. GYMNASIUM.—The spacious gymnasium for the boys and the commodious physical culture rooms for the girls are well equipped with dumb-bells, Indian clubs, chest weights and other apparatus to which additions are being made from time to time. Both of these departments have connected with them bath and toilet rooms of the most approved design, and the physical training is under the direction of competent instructors.

7. ATHLETIC GROUNDS.—In connection with the gymnasium a tract of land is used as a place for holding outdoor





LIBRARY BOOK ROOM

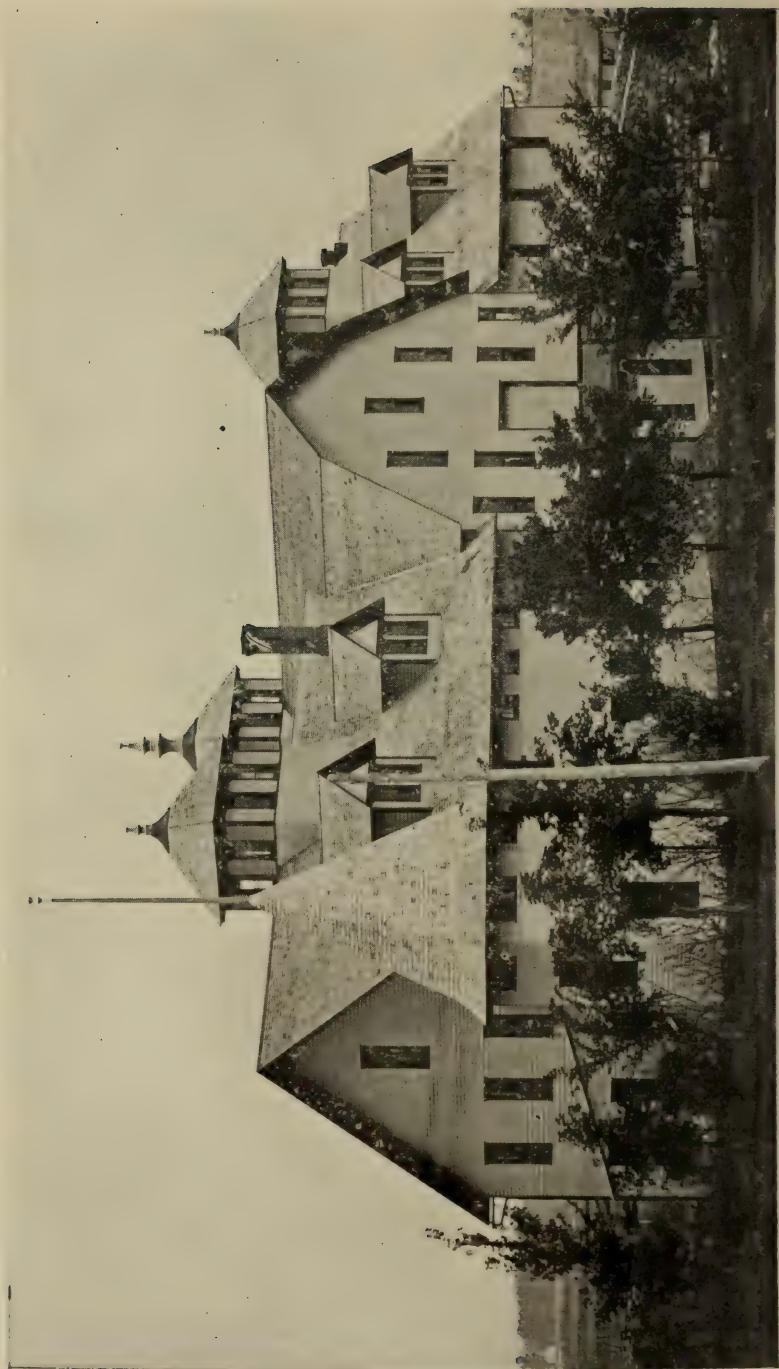
exercises and sports of an athletic character. These grounds are enclosed with a high board fence, and a comfortable amphitheater affords a large seating capacity to spectators.

8. **LIBRARY AND READING ROOM.**—The library, occupying rooms on the first floor of the Central Building, contains over eight thousand bound volumes and about six thousand pamphlets. The institution is a repository for the government and contains a nearly complete set of government publications since 1886. Many of the more valuable sets have been extended beyond that date. Care has been exercised in the selection of books in order that each department may have proper books of reference at the disposal of the students taking work in that line. The books are arranged according to the Dewey system of classification, and the card catalogue has been completed up to date, thus facilitating the use of the library. The files of many standard scientific and literary magazines are kept bound. The reading room portion is supplied with the leading periodicals and newspapers. The library is nearly all the time, day and evening, at the disposal of students for the purpose of study and reading. Some one is in charge at all times to give help and information to those using the library.

9. **MUSEUMS.**—The idea that museums are valuable as educational factors only as they furnish illustrative material for study has obtained in the collection of the various specimens and their arrangement in the several department museums. The Zoological, Botanical, Geological, Art and Engineering departments have made especially good beginnings in getting together material for that purpose. Constant additions are being made, thereby increasing their worth as adjuncts to laboratory work. The different collections are kept in the departments to which they belong.

10. **GENERAL STUDY ROOM.**—A general study room for the young ladies, in conjunction with the necessary retiring rooms and toilet facilities, occupies part of the basement of the North Building. The ladies of Brookings have very generously furnished part of the fittings necessary to its home-like appearance.

11. **LECTURE AND CLASS ROOMS.**—The class rooms are fitted to accommodate from thirty to fifty students each. Lec-



BARN



ture rooms are fitted with arm-rest chairs for ease in taking notes. The main lecture or assembly room is provided with opera chairs for seating about four hundred, and a fine electric dissolving projection lantern for illustrative purposes.

12. **SANITARY CONDITIONS.**—The water supply is of the very best, the water being of good quality and very pure. The rarity of zymotic and infectious diseases among the students is a proof that the sanitary conditions are excellent.

13. **HEATING.**—Good heating arrangements are a necessity in almost any climate but in a cold climate their importance increases. The main buildings are all heated with steam generated in a central heating plant. This plant also furnishes steam for running the machinery in the shops and generating electricity for lighting. Largely for purposes of cheerfulness and ventilation, fireplaces are provided in some of the offices.

14. **LIGHTING.**—The College owns and controls its own electric light plant, thus making the light at all times available and economical. Some of the rooms are provided with gas, which for purposes of illumination is used in Wellsbach Burners, making a brilliant light.

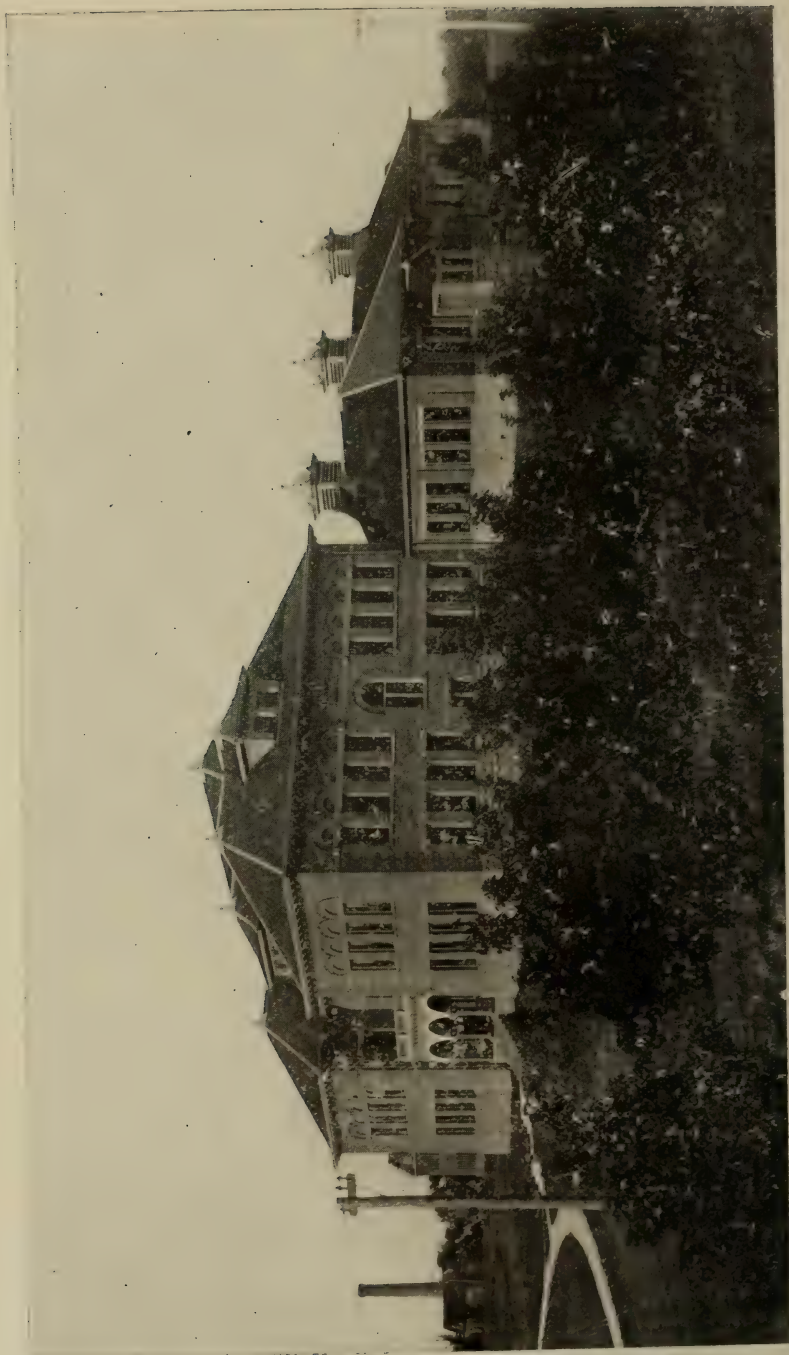
15. **POSTAL FACILITIES.**—The College furnishes first-class postal facilities, the mail of the students being delivered in one of the buildings at convenient times during the day, making it unnecessary for them to walk to the postoffice.

---

### C—Administration

1. **GOVERNING BOARD.**—By an act of the legislature approved March 10, 1897, provision was made for the appointment of the "Regents of Education," who should have charge of all the educational institutions of the state.

The law is, "The Governor, by and with the consent of the senate, shall appoint five persons of probity and wisdom from among the best and best known citizens, residents of different portions of the state, none of whom shall reside in the counties in which any of the state educational institutions are located, who shall be designated the regents of education." The terms of office of these regents, when first appointed were of different lengths and after the first terms, are each six years, thus making it a continuous body. Va-

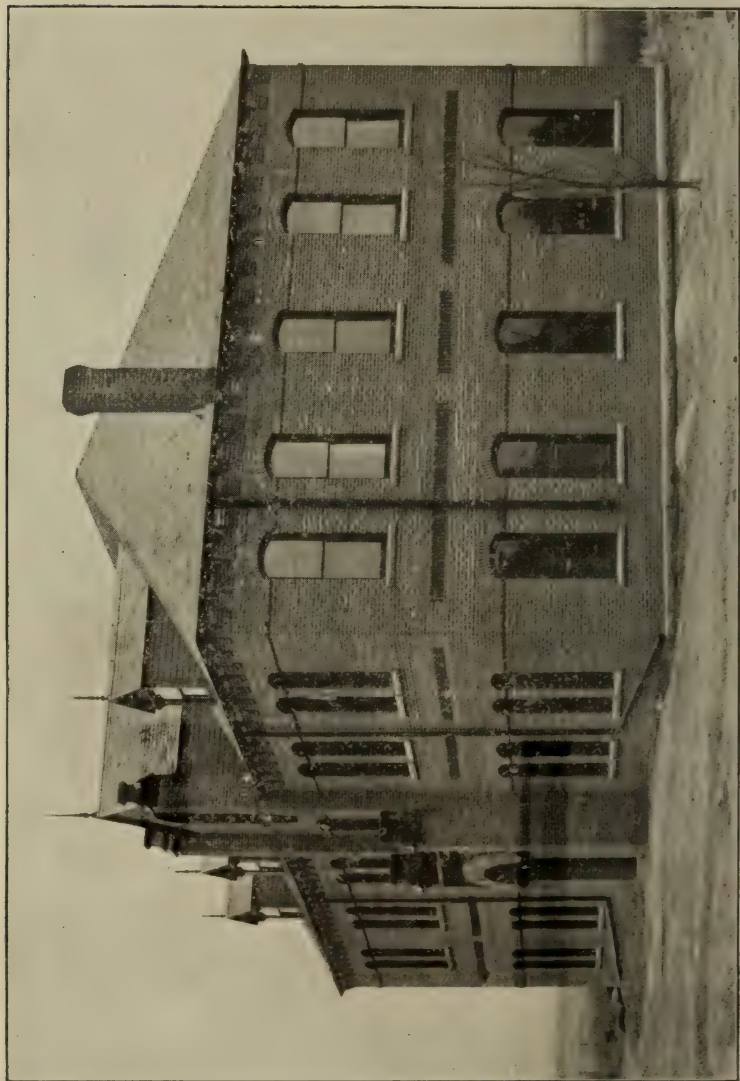


cancies are filled by the Governor during the recesses of the senate. "The board shall organize by electing one of their members president, and by the election of a secretary. Thus qualified and organized they shall have authority to make such rules as are necessary for their own government as a board and shall immediately assume the exclusive control and management of all the educational institutions which are maintained either wholly or in part by the state." Along this line the powers and duties of the regents are defined, among which important ones may be mentioned, to employ or dismiss members of the different faculties and other agents, to determine the proper number of teachers in said faculties, also their compensation and terms of employment, to establish departments, to settle upon courses of study, to determine the rules to be enacted for the government of students, to decide upon text books to be used, to fix tuition fees, to guard against unwise duplications of departments, to confer degrees, to control the United States Experiment Station, and to promote education among the farmers by providing for institutes, in fact to make all regulations as to the executive and instructional functions of the educational institutions of the state. The regents govern the College largely through a regents' committee.

2. FACULTY.—The faculty, consisting of the president and professors, all of whom are elected by the regents, determines in large part the general policy of the college. The professors are heads of the different departments of instruction which they represent and are responsible to the president who is in charge of all matters of administration. The president in turn, is responsible to the regents for the whole work of the institution. In order to aid the president in his executive duties, he appoints, at the beginning of each college year, certain faculty committees, which take up such work as may be assigned them by the president and faculty and thus greatly facilitate the transaction of business and economize the time of the faculty. (For list of committees for 1906-1907 see page 6).

3. DEPARTMENTS.—The educational and experimental work is performed by the following departments, the work





THE CHEMISTRY AND PHARMACY BUILDING

and equipment of which are described in detail under the headings designated.

DEPARTMENT	ABBREVIATIONS
Agriculture and Animal Husbandry	Ag.
Art	Ar.
Botany	Bt.
Chemistry	Ch.
Civil Engineering	Ce.
Commercial	Cl.
Domestic Science	Ds.
English	Eh.
Experiment Station	Ex.
Geology	Gl.
History and Political Science	H-P.
Horticulture	Ho.
Languages, (French and German.)	Ln.
Mathematics and Astronomy	Ms.
Mechanical Engineering	Me.
Military	Mt.
Music and Physical Culture	Mu.
Pedagogy and Latin	Pd.
Pharmacy	Py.
Physics and Electrical Engineering	Ph.
Preparatory	Pr.
Zoology and Veterinary Medicine	Zo.

4. STUDENT AFFAIRS.—Students are allowed wide latitude in carrying on affairs which vitally concern themselves, such as athletic, literary, musical and social organizations. The faculty, in all these matters, retains an advisory interest and aims to assist the students in every possible way in making these elements especially helpful to the student body as a whole. In the matter of social enjoyments the faculty is disposed to allow a reasonable amount of time for recreation, and endeavors to contribute as far as possible towards making the students happy and contented.

5. REQUIRED EXERCISES.—There are certain requirements in the way of work required of every student, among which are military exercises and physical culture. These subjects are thought to be of sufficient importance that every student can take them with profit.

6. **STUDENTS' LIVING ARRANGEMENTS.**—The faculty maintains the right to pass upon the living arrangements of every non-resident student. Residents of the town with whom students are boarding or lodging are requested to co-operate with the faculty in the efforts to improve the general condition of the students by exercising over them a careful supervision and reporting to the faculty any misconduct on the part of the students which may come to their notice. Upon coming to Brookings students should report at once to the president's office where they will be furnished all possible information with reference to their living arrangements.

7. **STUDENT CONDUCT.**—The chief end of school life being to obtain thorough mental and moral discipline, it becomes incumbent upon the faculty to make the conditions as far as possible conducive to that attainment. No set regulations are expected to cover every contingency arising, but it is necessary that all students should recognize the fitness and importance of such restraints as are in force, and co-operate in securing their observance. In the absence of any rule applying, the student's own good judgment should suggest the proper procedure.

8. **TUTORING.**—Students absent from class or College exercises or otherwise being unable to keep up with the work of their classes, will at the suggestion of the head of the department arrange with a regular tutor of that department for assistance.

---

#### D Special Information For Students

1. **TIME TO ENTER.**—Students are admitted at any time and assigned to such classes as they are found best fitted to enter, but it is much better to commence at the beginning of the college year. No reduction in college fees is made when the student enters after the beginning of a term, and if a student enters late he will not under any condition be allowed to hold a class back. If a tardy beginning is imperative the student must arrange with a tutor to assist him in bringing up his work, in order that he may go on understandingly and without hindrance to the class.

2. **EXPENSES OF STUDENTS.**—No young person should be deterred from obtaining a liberal education when such ad-





THE PLANT BREEDING BUILDING

vantages as this college offers can be had at a nominal price. The registration fees are four dollars per term and are payable at the time of registration. Books and stationery are furnished by the student. A laboratory fee of one dollar per term is charged for the use of each laboratory in which a student takes work. An estimate of the yearly expenses of a student is given below in three grades, viz:

	LOW.	AVERAGE.	LIBERAL.
Tuition and Incidental Fees	\$ 12.00	\$ 12.00	\$ 12.00
Board and Room	110.00	140.00	160.00
Laundry	12.50	15.00	25.00
Books and Stationery	15.00	25.00	35.00
Laboratory Fees	0.00	3.00	8.00
	<hr/> \$149.50	<hr/> \$195.00	<hr/> \$240.00

Male students are expected to purchase uniforms, which range in cost from \$12.00 to \$18.00, and female students must furnish themselves with special costumes, which are not necessarily expensive, for use in physical culture.

3. TERMS AND VACATIONS.—The regular work of the College is carried on continuously during the Fall, Winter and Spring terms, which are designated in the schedule as F. W. S. The principal vacation of the year occurs in the summer, from the middle of June nearly to the close of September. The work of the Fall term begins in 1906, on September 24th, and continues until December 21st, a period of thirteen weeks of five days' work each. The winter vacation will begin on December 22nd, and last until January 2nd, 1907, when the work of the Winter term will begin. The Winter term will last from January 2nd to March 20th, a period of eleven weeks and one day. The Spring term will begin March 25th, continuing eleven weeks and four days, and ending June 13th, after all the exercises of commencement week are completed. The matter of classifying should be arranged before recitation and laboratory work is begun.

4. LIVING ARRANGEMENTS.—Boarding facilities are not provided in connection with the College. Every effort is made, however, by the officers of the institution to secure suitable and satisfactory boarding places for students and a special faculty committee has this matter in charge.

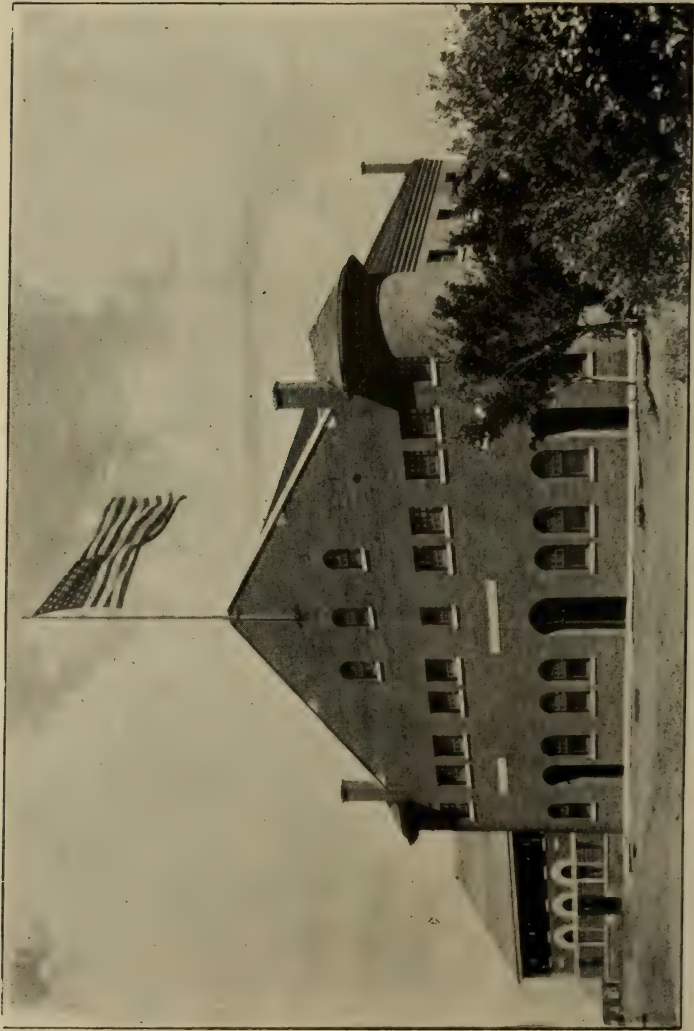
Good rooms can be secured in the city at private houses or hotels for 50 cents per week and upwards. There are also many places where rooms and board can be obtained at reasonable rates. A list of approved available places for boarding or rooming, can, at any time, be obtained from the president of the College. The Christian Associations make it a point at all times to assist new students in finding proper living accommodations.

5. STUDENT LABOR.—The terms are so distributed through the year as to give the longest period of vacation possible in the summer, thus enabling students to earn money. There is a limited amount of paid labor about the institution which can be done by students and it is the policy of the regents to give as much work to deserving students as is consistent with the best interests of all. However, no one should expect to earn his entire expenses while at college and doing school work, or be assured of an income in advance from paid labor.

6. SCHOLARSHIPS. The following article from the law, defining powers and duties of the regents of education is self-explanatory. "The regents of education shall fix all rates of tuition and of other fees to be paid by students, but such rates must be the same in all the different institutions. They may receive free of tuition two students appointed by each senator and one by each representative of the state legislature in any one of the institutions under their control, provided that the period for which appointment was made shall expire with the term of office of said senator or representative and provided that such appointees shall comply with all the rules and requirements of the institution which they desire to enter. No student, however, shall receive any other gratuity whatever." The regents of education make this article operative in the case of this institution.

7. Co-EDUCATION.—Recognizing the value of Industrial training as a feature of a practical institution for the masses, the College authorities have provided the various shops and laboratories in which the young men of the state may become familiar with the uses of the different tools required in the principal mechanical industries. These special facilities are not confined to the young men, but special depart-





DRILL HALL AND GYMNASIUM

ments such as Domestic Science, Art and Music have been established, so that the young lady students may have opportunities to fit themselves for a keener appreciation of the realities and enjoyments of life in the home, the school room, the store, the office or the factory. The young woman will profit as much by the introduction of rational methods into her education as the young man, and while the shops, studios and laboratories may be used in some instances by the young man, and in others by the young woman, they are all open to both and in most cases students of both sexes will be seen working side by side. Instead of military drill the young lady students are required to take physical culture.

8. **MILITARY REQUIREMENTS.**—The national law organizing and endowing these agricultural colleges requires that military science shall form part of the instruction offered. For the regulations governing these requirements, see Military Department.

9. **PHYSICAL CULTURE.**—Physical Culture is required of female students twice a week for the first three continuous years of the time they are students in the institution, or until the Sophomore year is completed. Students taking Physical Culture will furnish special costumes for the same as indicated by the instructor. In regard to excuses from Physical Culture, the same rule holds as in the case of military exercises.

10. **CHAPEL EXERCISES.**—Chapel exercises are held on each college day and all students are cordially invited to attend. The exercises on Tuesday usually consist of announcements and an address by some competent person. Attendance on Tuesdays is required of all students.

11. **PUBLIC ENTERTAINMENTS.**—In all cases of public entertainments the students taking part are required to submit their exercises first to the officer regularly in charge of such work and to rehearse before the Instructor in Elocution at least ten days before the day of public performance, and as often as the instructor may designate.

12. **ATHLETICS.**—Many forms of athletic exercises are practiced and are recommended and encouraged by the officers of the College. Under the auspices of the local organization and a number of College Athletic Associations of the

state, all kinds of athletic sports are practiced and encouraged. The local representatives contest at the "State Meet" once a year for athletic honors. Students should understand,



TRACK TEAM

however, that their studies must receive the first consideration; and that the purpose of athletic exercises is to develop gentlemanly and ladylike qualities in those who participate in them.

13. STUDENT ORGANIZATIONS.—In the matter of student societies, the faculty allows the greatest freedom consistent with the general welfare. Those organizations which receive financial support from the student body and the general public are required to submit, at the close of the school year a detailed report to the proper committee from the faculty.

14. LITERARY SOCIETIES.—A generous and fruitful rivalry for college Honors exists between them, stimulating each to its best efforts. These societies are an important factor in the student's education and all are strongly advised to become members. All preparatory students are expected to





Y. W. C. A. OFFICERS

become members of the Franklin society. The work of this society is carried on under the supervision of the head of the preparatory department and has a special function as a preparation for college society work. The faculty realizing the value of society work has offered a trophy to be competed for by the Athenian and Miltonian literary societies. These societies are composed entirely of college students and meet in their respective halls on every Saturday evening.

15. CHRISTIAN ASSOCIATIONS.—The young men's and young women's Christian associations of the College are voluntary organizations. The purpose of the local organizations is to promote growth in grace and Christian fellowship among their members. They seek to surround the students



Y. M. C. A. OFFICERS

with an earnest spiritual atmosphere; to minister to their intellectual, moral and social well being; and to exert a voluntary Christian influence in the college which shall be strong and helpful. As members of the Christian inter-collegiate movement they receive all the benefits which accrue from such fellowship. The Y. M. C. A. is personally supervised by the secretary for North and South Dakota. He receives half of his support from the local association and de-

votes half of his time to its interests. The Y. W. C. A. is supervised by state and inter-national college secretaries. Each association maintains prayer meetings and weekly devotional services.

16. ORATORICAL ASSOCIATION.—The purpose of this organization is to promote the art of public speaking among the students of the college. Each year it sends a representative selected in a preliminary contest, to the inter-collegiate contest of the state. In order that this contestant may fully represent the College, the faculty has imposed the requirement that those competing for this honor must be pursuing regular work for the Bachelor's degree above that of the Freshman year.

17. OTHER ORGANIZATIONS.—Among other organizations may be mentioned the Athletic Association, which concerns itself with the athletic interests of the college; and technical societies, such as the Art Club, Pharmacy Club, Choral Union, Euterpe society, etc., each occupying its own sphere of influence.

18. STUDENT PUBLICATIONS.—The "Industrial Collegian" is a sixteen-page monthly magazine published by the students of the College. The "Collegian" aims not only to be an organ of the student body but a mirror of student life at this institution. The editorial staff is composed of the Editor-in-Chief, a Business Manager, and one member selected by each regularly organized literary society in the College. The Editor-in-Chief and Business Manager are selected at the close of each Winter term by the students who are at the time of such election bona-fide subscribers of the "Collegian." The "Jack Rabbit," an annual gotten out by the Junior class, is a good representative and an exponent of college life.

19. COLLEGE WORK.—The instructional work of the institution divides itself naturally into two main classes, studies which lie at the foundation of the Agricultural processes and those which bear more directly upon technological lines of work such as Mechanical, Electrical and Civil Engineering. The work of the College is moreover offered in such a way as to be best adapted to individual characteristics



and needs and at the same time to secure for all a well rounded and symmetrical development.

20. **GENERAL CONDITIONS OF ADMISSION.**—The candidate for admission to the College must be at least fourteen years of age and of good moral character. Students applying for entrance to the Preparatory department must present evidence that they have completed the work of the public schools as far as the ninth grade; and no one is allowed to pursue the work of the Sub-Freshman year or higher work until grades in the Preparatory course have been obtained. Before entering upon any College work, students must present satisfactory evidence that they have completed the prerequisites to that work.

21. **TIME OF ENTRANCE EXAMINATION.**—The first two days of the fall term will be devoted to examining students applying for admission, both to College and the Preparatory department.

22. **ENTRANCE CONDITIONS.**—A student may be admitted to the College without having passed in one or two of his entrance studies. These shall stand against him and must be cleared up within one year after entrance or the student will be required to take the subject with the regular classes.

23. **CREDITS FROM EXAMINATIONS.**—Students will be allowed to take examinations in any subject offered without being regular members of the class pursuing that subject, if they have standings in all the prerequisites to that subject, provided that the head of the department concerned is convinced that the subject has been covered in a satisfactory manner; and having passed in the subject, students shall receive due credit therefor.

24. **ADMISSION FROM OTHER INSTITUTIONS.**—Students will be admitted to the College upon certificates from other reputable institutions, provided that these show that the students were honorably dismissed from those institutions, and have satisfactorily completed the work for which credit is asked. The College reserves the right, however, to cancel grades accepted from other schools should the student be found deficient in the subjects for which credit has been given.

25. **SPECIAL STUDENTS.**—Students of mature years who



PRESIDENT'S RESIDENCE

have passed in the work of the Preparatory department, may be allowed to pursue special studies if not candidates for a degree, but they must satisfy the faculty that they are qualified to take up the studies desired.

26. **METHOD OF REGISTRATION.**—The student should obtain a classification card in the registrar's office upon which is written the names of the subjects to be pursued, according to the rules governing classification. The classification committee of the faculty will furnish all possible assistance in classifying students. New students must also fill out and file with the registrar cards giving desired information concerning themselves. Standings from the public schools or other educational institutions should also be filed with the registrar at this time. Upon receipt of the fees for the term, the secretary of the College stamps the classification card which is then to be presented to the different instructors under whom work is to be taken for their signatures, and in order that they may also enroll the student in their classes. This card should then be returned to the registrar. In no case should it be retained longer than three days after being issued.

27. **COURSES DEFINED.**—A full recitation course is a five hour per week lecture or text book study for one term, and is designated as a small (a) course. A full laboratory course is a ten hour per week exercise for a whole term and is designated as a small (b) course. A course combining recitation and laboratory work is designated as a small (a, b) course. No student will be permitted to take more than four and one-half nor less than three courses in any one term without special permission from the classification committee.

28. **GRADES.**—All grades are reported to the registrar in figures on a scale of 100 as perfect. Grades are reported to students in classes as follows: Class "A" representing grades between 90 and 100. Class "B" from 80 to 90. Class "C" from 70 to 80. Classes "D" and "F" for all grades below 70. Students having a term grade of "A" may not be required to take final examination with their class. Grade "D" indicates that the student is conditioned, and may make up the work under a tutor, providing that this is done before the course is again offered. "F" indicates that the



subject in question must be repeated with a regular class before a passing grade is obtained.

In determining a final grade ordinarily twice the recitation grade is added to the final examination grade and one-third of the sum is the "final grade." Large latitude is given the teacher, especially in the more advanced work, in the student's "final grade."

29. **CONDITIONED STUDENTS.**—No student is allowed to register for advanced work who is conditioned in more than one course pursued in any one preceding term, neither will a student be permitted to register for advanced work at the beginning of any college year with more than one condition from previous work except when the student by permission changes his major and minor and satisfies the faculty that he is unable to remove conditions.

30. **ATTENDANCE AND DISMISSAL.**—Students are expected to attend regularly all the exercises of the classes to which they are assigned from the date of their classification. When once classified they are required to be present from the beginning of each term thereafter, until regularly dismissed.

When a student finds it necessary to be absent he should get an excuse in advance, if possible. Otherwise he should present a properly written request for an excuse to his instructor by the second day after his return to class. Excuses will be granted only when the absence seems necessary.

Unexcused absences from classes are reported by the instructors to the registrar. Any student having three unexcused absences will have his case referred to a special committee for investigation. Should a student find it necessary to be late to his class he should make a satisfactory explanation at the close of the period to his instructor, otherwise the tardiness will be marked unexcused. Three unexcused tardinesses will count as an unexcused absence.

All omitted work must be made up within two weeks after return to College duties, unless the health of the student requires a longer period. This omitted work must be made up according to the direction of the instructor and at times designated by him or the tutor in charge of same. Should a student find it necessary to sever his connection with the institution before his work is completed at any



time during the term, he should report to the president his reasons and secure an honorable dismissal; otherwise no standings will be entered in the records giving him credit for work done during the term.

31. CHARGE FOR TUTORING.—The charges which tutors are allowed for giving instruction are graded according to the nature of the work and the number of students taking work together, and for single periods, the maximum length of which is one hour, are shown by the following scheme:

Number of students	1	2	3	4	5	6 or more
Preparatory subjects	15c	25c	35c	40c	45c	50c
Sub-Freshman subjects	20c	30c	40c	45c	50c	55c
Fresh. and Soph. subjects	25c	35c	45c	50c	55c	60c
Jun. and Senior subjects	30c	40c	50c	55c	60c	65c

In the absence of any instruction from the teacher as to the time a student should spend with a tutor in making up work, the tutor should see that the student covers the work which the teacher has assigned.

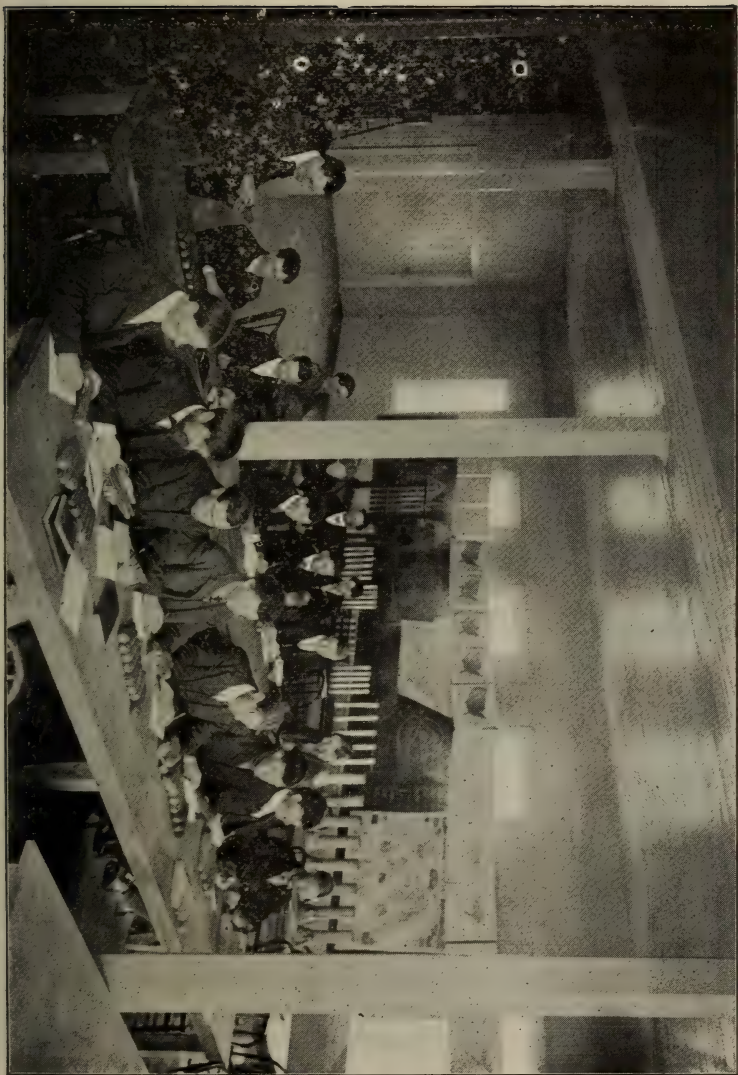
Students will be held responsible by the faculty for the payment of tutor fees. These must be paid to the respective heads of departments who will hand the same over to the tutors as soon as satisfactory reports concerning the work done have been received from the latter.

Should a student be absent from an appointment which has been made with a tutor, he shall be required to pay the same fee as if he had been present.

32. DEGREES.—Students who complete the two years pharmacy course receive the degree of Pharmacy Graduate (Ph. G.)

Those who complete the full four years course in either agriculture, horticulture, domestic science, general science, mechanical engineering, electrical engineering, civil engineering or pharmacy, receive the degree of Bachelor of Science (B. S.) in the above specified lines of work which they pursue. For this degree the student must complete in a satisfactory manner the work of one of the schemes mentioned in paragraph 35. This requires not less than forty-two courses above the Sub-Freshman year exclusive of military or physical culture.

The advanced degree of Master of Science (M. S.) will



CLASS IN CORN JUDGING

be conferred upon students who complete the appropriate undergraduate course in any of the above lines of study, and an additional amount of work equal to fourteen courses to be chosen along appropriate lines and in not more than two departments, in each of which credit for at least six collegiate courses has already been obtained, the advanced work to be done as prescribed by the faculty. Eight or more of the courses, constituting the "major," must be chosen from one department. At least one year of this work must be done while in residence.

33. DEPARTMENT.—Every student is allowed the fullest freedom of conscience and is supposed to have well grounded habits of politeness, industry, punctuality and integrity, but certain faculty regulations are necessary. Smoking is prohibited upon the College grounds. Few rules are made by the authorities, but for disregard of duties, the breaking of rules, or any ungentlemanly or unladylike conduct proper punishments will be inflicted.

34. SPECIAL COURSES.—The College also offers special courses in several important and practical lines of work. These are mentioned in connection with the departments principally concerned and are as follows:

1. Two years' work in Pharmacy above Sub-Freshman year.

2. One year's work in Business Branches above Sub-Freshman year.

3. One year's work in Amanuensis Branches above Sub-Freshman year.

4. Three year's Teachers Course.

5. Two years' work in Agriculture.

6. Two terms' work in Steam Engineering.

7. One term's work in Dairy Science.

8. One term's work in Domestic Science.

9. Special work in Vocal and Instrumental Music.

10. Special work in Art.

11. Lectures on Animal Husbandry, six weeks.

12. Lectures on Farm Practice, six weeks.

13. Lectures on Horticulture, six weeks.

14. Lectures on Veterinary Medicine, six weeks.

35. SCHEMES OF STUDY.—The work leading to a Bachelor's degree may be done according to any one of the





THE CREAMERY



courses mapped out on pages 49 to 58. Through these the work of the College is adapted not only to different classes of students, but to individual students themselves. The entrance requirements to each of these groups, excepting the Teacher's course and the special course in Agriculture, is the work of the Sub-Freshman year.

Before entering upon the duties of the junior year, students should map out their work for the remaining two years, in a manner satisfactory to the professors under whom elective work is to be taken. Heads of the departments and members of the classification committee will give all possible assistance towards helping the students make a proper selection of subjects.

**36. ELECTIVES.**—Nine electives in the General Science Course must be chosen according to the following rules:

No work ordinarily offered below the Sophomore year can be elected towards a degree. Where they deem it advisable, the faculty and heads of departments may impose special rules and restrictions governing the choice of electives. In no case shall the student be allowed to elect towards a degree more than three courses in industrial subjects such as cooking and shop work, or exercises of a similar character such as art and music; and these must be from the more advanced grades.

Five of the elective courses must be chosen along some one line of work, that in which the student wishes to specialize most, and shall constitute his "major." Three other courses must be chosen along some second line, and shall be called his "minor." One general elective is allowed, which is intended to contribute to the general scholarship of the student and should be selected with this object in view.

"Majors" may be chosen in the following departments: Agriculture, Horticulture, Botany, Chemistry, Zoology, and Veterinary Medicine, Pharmacy, English, History and Political Science, Mathematics, Physics, Mechanical, Electrical, Civil Engineering, and Domestic Science.

"Minors" may be chosen in the same departments as majors and also in Foreign Languages, Art and Music.

The general elective may be chosen from those courses which are offered as major and minor subjects.

**37. AGRICULTURAL GROUP.**—The following thirty-six courses are required:

Animal Husbandry, one and two-fifths courses; Stock Judging, Breeds of Live Stock.

Astronomy, one course.

Botany, three courses: General.

Chemistry, five courses: Inorganic, Organic, Quantitative, Agricultural.

Economics and Philosophy, three and two-fifths courses: Psychology, Sociology, Political Economy, Ethics and Applied Psychology.

English, three courses: English Literature, English Classics, Theme-Writing.

Entomology, one course.

Geology, two courses.

History, two courses: General.

Horticulture, one and two-fifths courses.

Language, six courses: German or Latin.

Mathematics, two courses: Solid Geometry, Trigonometry, Surveying.

Physics, two courses: General.

Zoology, three courses: Invertebrate, Vertebrate, and Veterinary Physiology.

Military.

Seven additional courses are required under the following restrictions:

Those students wishing to specialize along the lines of Agriculture, Animal Husbandry, Dairying or Veterinary, must take the above thirty-six courses and must also elect some one of the four groups (seven courses) given below:

**AGRICULTURAL STUDENTS** must take: Soil Physics, Farm Crops, Farm Mechanics, three courses

Stock Breeding and Stock Feeding, one and two-fifths courses.

And must elect two and three-fifths more courses from the departments of Agriculture, Animal Husbandry, Dairying, Horticulture or Veterinary. Special work along these lines will be provided when practicable.

**ANIMAL HUSBANDRY** students must take in addition to the above mentioned thirty-six courses, the following:



SOIL PHYSICS APPARATUS

Stock Breeding and Stock Feeding, one and two-fifths courses.

Dairying, one course.

Veterinary Medicine, three and one-fifth courses.

Electives as in Agriculture, one and two-fifths courses.

DAIRY STUDENTS must take in addition to the above thirty-six courses the following:

Dairying, one course; Stock Breeding and Stock Feeding, one and two-fifths courses.

Electives as provided above, four and three-fifths courses.

VETERINARY STUDENTS must take in addition to the above thirty-six courses the following:

Veterinary Medicine and Horse Shoeing, three and one-fifth courses.

Electives as above provided, three and three-fifths courses.

38. SCHEDULES.—On the next few pages the schedules of the work leading to the Bachelor degrees are given. The notation immediately after the name of a subject indicates its nature and the number of times it occurs a week, “a” referring to the class work, and “b” to the laboratory exercises. For requirements in military exercises and physical culture see Military Department and Department of Music and Physical Culture. Those wishing to take elective subjects must choose them according to the rules governing the choice of electives, (See 36).

All male students, excepting those classified in special short courses, not exceeding one term's length, will be required to take military, sufficient to meet the requirements of the War Department.





THE MUSEUM

# SCIENTIFIC AGRICULTURE

## FALL

## WINTER

## SPRING

FRESHMAN

8:30 Inorgan. Chem .....a & b 5  
9:30 Geometry.....a 3  
10:30 Stock Judging.....a 5  
1:15 Gen. Botany.....a 2 b 3  
2:15  
3:15 Military.....3

Gen. Botany.....a 2 b 3  
English Classics.....a 5  
Organic Chem.....a 4 b 1  
{ Breeds of Live Stock.....a 2  
{ Surveying.....b 2  
Military.....5

SOPH.

8:30 Gen. Physics.....a 3 b 2  
9:30 Language.....a 5  
10:00 Invertebrate Zool.....a 2 b 3  
1:15 Quant. Chem.....b 5  
2:15  
3:15 Military.....3

Veterinary Physiology.....a 5  
Language.....a 5  
General History.....a 5  
Agr Chemistry.....a 5  
Military.....a 5

JUNIOR

8:30 Soil Physics.....a 2 b 3  
9:30  
10:30 Geology.....a 5  
1:15 Language.....a 5  
2:15 Horse Shoeing.....a 2  
3:15 Theme Writing.....a 3

Dairying.....b 5  
Language.....a 5  
{ Stock Breeding.....a 2  
{ Veterinary Medicine.....a 3  
{ Psychology.....a 4  
{ Theme Writing.....a 1

SENIOR

8:30 Horticulture.....a 3 b 2  
9:30  
10:30 Astronomy.....a 5  
1:15 Veterinary Medicine.....a 5  
2:15  
3:15 Sociology.....a 3

{ Stock Feeding.....a 3  
{ Entomology.....a 3 b 2  
Ethics & Applied Psychology a 5  
Landscape Gardening.....a 2  
Forestry.....a 3

## SPECIAL COURSE IN AGRICULTURE

## FIRST YEAR

## FALL

8:30	Ele. Physics.....a 3 b 2
9:30	{ Horticulture .....a 2
	{ Stock Judging.....a 3
10:30	English.....a 5
1:15	
2:15	{ Horse Shoeing .....a 2
	{ Elocution.....a 1
3:15	Military.....3

## WINTER

Horticulture.....a 3
Ele. Physics.....a 3 b 2
English .....a 5
{ Elocution.....a 1
{ Stock Judging .....a 2
Veterinary Medicine.....a 3
Military.....3

## SPRING

Ele Physics.....a 4 b 1
English.....a 3
Breeds of Live Stock.....a 2
{ Veterinary Medicine .....a 3
{ Elocution .....a 1
Military......5

## SECOND YEAR

8:30	Chemistry .....a & b 5
9:30	{ Dairying.....b 5
	{ Veterinary Medicine.....a 5
10:30	
1:15	Practical Agriculture.....a 3
2:15	Military .....3
3:15	

Chemistry.....a & b 5
Horticulture.....a 3
{ Practical Agriculture.....a 3
{ Stock Feeding .....a 2
Carpentry.....b 3
Military.....3

Stock Feeding.....a 3
Practical Agriculture.....a 3
Chemistry.....a 4 b 1
Forging.....b 3
{ Stock Breeding.....a 2
{ Forestry.....a 3
Military......5

# HORTICULTURE

## FALL

FRESHMAN  
8:30  
9:30  
10:30  
1:15  
2:15  
3:15

Inorgan. Chem.....a & b 5  
Geometry.....a 3  
Stock Judging.....a 5  
General Botany.....a 2 b 3  
Military .....3

SOPH.  
8:30  
9:30  
10:30  
1:15  
2:15  
3:15

General Physics.....a 3 b 2  
Language.....a 5  
Invertebrate Zool.....a 2 b 3  
Quantitative Chem.....b 5  
Military .....3

JUNIOR  
8:30  
9:30  
10:30  
1:15  
2:15  
3:15

Horticulture.....a 3 b 2  
Geology.....a 5  
Language.....a 5  
Theme Writing.....a 3

SENIOR  
8:30  
9:30  
10:30  
1:15  
2:15  
3:15

Soil Physics.....a 2 b 3  
Astronomy.....a 5  
Advanced Rhetoric.....a 5  
Sociology.....a 3

## WINTER

Inorgan. Chem.....a & b 5  
Trigonometry.....a 5  
English Literature.....a 5  
General Botany.....a 2 b 3  
Military.....3

General History.....a 5  
Language.....a 5  
General Physics.....a 3 b 2  
Vertebrate Zool .. .a 2 b 3  
Military.....3

{ Pomology .... a 3  
  \*Floriculture .....a 2  
  Geology.....a 5  
  Farm Crops.....a 2 b 3  
  Language.....a 5  
  Theme Writing.....a 1  
  Military Lectures .....a 1

Stock Feeding.....a 2  
Horticulture.....a 2  
Political Economy.....a 5  
Structure and Style.....a 5  
Military Lectures.....a 1  
\*Elective

## SPRING

General Botany.....a 2 b 3  
English Classics .. .a 5  
Organic Chem.....a 4 b 1  
{ Breeds of Live Stock.....a 2  
  Surveying .....b 2  
  Military .....5

Physiology.....a 4 b 1  
Language.....a 5  
General History.....a 5  
Forestry .....a 3  
Military .....5

American Institutions .....a 5  
Entomology.....a 3 b 2  
Language.....a 5  
{ Theme Writing .....a 1  
  Psychology .....a 4

Ethics and Applied Psychol-  
ogy .....a 5  
Landscape Gardening.....a 2  
Modern Essayists.....a 5



## DOMESTIC SCIENCE

## FALL

## WINTER

## SPRING

FRESHMAN					
8:30	Inorgan. Chem.....	a & b 5	Inorgan. Chem.....	a & b 5	Gen Botany.....
9:30	Geometry.....	a 3	Trigonometry.....	a 5	English Classics.....
10:30	Vertebrate Zool.....	a 3 b 2	English Literature.....	a 5	Organic Chem.....
1:15	General Botany.....	a 2 b 3	General Botany.....	a 2 b 3	Sewing.....
2:15					
3:15	Physical Culture.....	2	Physical Culture.....	2	Physical Culture.....
8:30	General Physics.....	a 3 b 2	General History.....	a 5	Physiology.....
9:30	Language.....	a 5	Language.....	a 5	Language.....
10:30	Invertebrate Zool.....	a 2 b 3	General Physics.....	a 3 b 2	General History.....
1:15	Quantitative Chem.....	b 5	Chemistry of Foods.....	a & b 5	Foods.....
3:15	Physical Culture.....	2	Physical Culture.....	2	Physical Culture.....
8:30	Bacteriology.....	a 2 b 3	{ H N. & Invalid Cook .....	a 2	Amer Institutions.....
9:30	Foods.....	a & b 5	{ H. H. Economy .....	a 3	Dietetics.....
10:30			Design.....	a 2	
1:15	Language.....	a 5	Language.....	a 5	Language, .....
3:15	Theme Writing.....	a 3	Theme Writing.....	a 1	{ Theme Writing .....
8:30	{ *Art History.....	a 2	{ *Floriculture .....	a 2	{ General Hygiene.....
9:30	{ H. H. Sanitation.....	a 3	{ *Art History .....	a 2	{ *Art History.....
10:30	Astronomy .....	a 5	Political Economy .....	a 5	Fabrics.....
1:15					Ethics and Applied Psychol
2:15	Advanced Rhetoric.....	a 3	Elements of Geology .....	a 5	ogy.....
3:15	Sociology.....	a 3	Structure and Style.....	a 5	Modern Essayists.....
		*Elective			
JUNIOR					
SENIOR					

# GENERAL SCIENCE COURSE

## FALL

## WINTER

## SPRING

FRESHMAN

8:30 Inorgan. Chem.....a & b 5  
9:30 Geometry.....a 3  
10:30  
1:15 General Botany.....a 2 b 3  
2:15  
3:15 Military.....3

Inorgan. Chem... ..a & b 5  
Trigonometry.....a 5  
English Literature.....a 5  
General Botany.....a 2 b 3  
Military.....3

{ Higher Algebra.....a 5  
or Gen. Botany.....a 2 b 3  
English Classics.....a 5  
Organic Chem.....a 4 b 1  
Surveying..b 2 or  
General Botany.....a 2 b 2  
Sewing.....b 3  
Military.....5

SOPH.

8:30 General Physics... ..a 3 b 2  
9:30 Language.....a 5  
10:30 Invertebrate Zool.....a 2 b 3  
1:15  
2:15  
3:15 Military.....3

Language.....a 5  
General Physics.....a 3 b 2  
Vertebrate Zool.....a 2 b 3  
Military.....2

Physiology.....a 4 b 1  
Language.....a 5  
Military.....5

JUNIOR

8:30  
9:30  
10:30  
1:15 Language.....a 5  
2:15  
3:15 Theme Writing.....a 3

General History.....a 5  
Language.....a 5  
{ Theme Writing.....a 1  
Military Lectures.....a 1

General History.....a 5  
Language.....a 5  
{ Theme Writing.....a 1  
Psychology.....a 4  
Amer. Institutions.....a 5

SENIOR

8:30  
9:30  
10:30  
1:15 Astronomy.....a 5  
2:15  
3:15 Advanced Rhetoric.....a 5  
Sociology.....a 3

Political Economy.....a 5  
Elements of Geology.....a 5  
Structure and Style.....a 5  
Military Lectures.....a 1

Ethics and Applied Psychology.....a 5  
Modern Essayists.....a 5

## MECHANICAL ENGINEERING

## FALL

## WINTER

## SPRING

FRESHMAN

8:30 Organic Chemistry.....a & b 5  
 9:30 Geometry.....a 3  
 10:20 Invertebrate Zool.....a 3 b 2  
 1:15 Ele. Botany.....a 2 b 3  
 2:15  
 3:15 Military.....3

SOPH.

8:30 General Physics.....a 3 b 2  
 9:30 French.....a 5  
 10:30 Geology.....a 5  
 1:15 Shopwork.....b 3  
 2:15  
 3:15 Military.....3

JUNIOR

8:30 Calculus.....a 5  
 9:30 Ele of Mech.....a 5  
 10:30 Advanced Physics.....a 5  
 1:15 Machine Design.....b 5  
 2:15  
 3:15 Theme Writing.....a 3

SENIOR

8:30 Steam Boilers.....a 5  
 9:30  
 10:30 Astronomy.....a 5  
 1:15 Kinematics.....b 5  
 2:15  
 3:15 Sociology.. .....a 3

Inorganic Chemistry.....a & b 5  
 Trigonometry.....a 5  
 English Literature.....a 5  
 Mech. Drawing.....b 5  
 Military.....3

Anal. Geometry.....a 5  
 French.....a 5  
 General Physics.....a 3 b 2  
 Shopwork.....b 3  
 Military.....3

General History.....a 5  
 Dyn. Elec. Machinery.....a 3 b 2  
 Anal. Mechanics.....a 5  
 Machine Design.....b 3  
 { Theme Writing.....a 1  
 { Military Lectures.....a 1

Strains in Framed Structures.....a 5  
 Political Economy.....a 5  
 Engineering Design.....b 5  
 { Military Lectures.....a 1  
 { Experimental Engineering b 4

Higher Algebra.....a 5  
 English Classics.....a 5  
 Organic Chemistry... ..a 4 b 1  
 { Surveying.....b 2  
 { Forging.....b 3  
 Military.....5

General Physics... ..a 4 b 1  
 French.....a 5  
 Calculus.....a 5  
 Shopwork.....b 3  
 Military.....5

Steam Engine.....a 5  
 General History.....a 5  
 Dynamo Electric Machinery.....a 3 b 2  
 { Psychology.....a 4  
 { Theme Writing.....a 1

St. of Materials.....a 5  
 Ethics and Applied Psychology.....a 5  
 Engineering Design.....b 5

# ELECTRICAL ENGINEERING

## FALL

FRESHMAN  
 {  
 8:30  
 9:30  
 10:30  
 1:15  
 2:15  
 3:15

Inorganic Chemistry....a & b 5  
 Geometry.....a 3  
 Invertebrate Zool.....a 3 b 2  
 Ele. Botany.....a 2 b 3  
 Military.....3

SOPH.  
 {

8:30  
 9:30  
 10:30  
 1:15  
 2:15  
 3:15

General Physics.....a 3 b 2  
 French.....a 5  
 Geology.....a 5  
 Shopwork.....b 3  
 Military.....3

JUNIOR  
 {

8:30  
 9:30  
 10:30

Calculus.....a 5  
 El. of Mech.....a 5  
 Adv. Physics.....5  
 Machine Design.....b 5

3:15

Theme Writing.....a 3

SENIOR  
 {

8:30  
 9:30  
 10:30  
 1:15  
 2:15  
 3:15

Steam Boilers.....a 5  
 Alt. Currents.....a 3 b 2  
 Astronomy.....a 5  
 Sociology.....a 3

## WINTER

Inorganic Chemistry....a & b 5  
 Trigonometry.....a 5  
 English Literature.....a 5  
 Mech. Drawing.....b 5  
 Military.....3

Anal. Geometry.....a 5  
 French.....a 5  
 General Physics.....a 3 b 2  
 Shopwork.....b 3  
 Military.....3

General History.....a 5  
 { Dynamo Electric  
 { Mach.....a 3 b 2  
 Anal. Mech.....a 5

Machine Design.....b 3  
 { Military Lectures.....a 1  
 { Theme Writing.....a 1

Electric Light & Power  
 District.....a 3 b 2  
 Political Economy .....a 5  
 Dynamo Design.....b 5

{ Military Lectures.....a 1  
 { Experimental Engineering b 4

## SPRING

Higher Algebra.....a 5  
 English Classics.....a 5  
 Organic Chemistry.....a 4 b 1  
 { Surveying.....b 2  
 { Forging.....b 3  
 Military.....5

General Physics .....a 4 b 1  
 French.....a 5  
 Calculus.....a 5  
 Des. Geometry.....b 5  
 Military.....5

Steam Engine.....a 5

General History.....a 5

Dynamo Electric  
 Machinery.....a b 2

{ Psychology.....a 4  
 { Theme Writing.....a 1

Design of Power  
 Station.....a 3 b 2  
 St. of Materials ..a 5  
 Ethics and Applied Psychol...a 5



## CIVIL AND AGRICULTURAL ENGINEERING

## FALL

8:30	Inorganic Chem.....	a & b 5
9:30	Geometry.....	a 3
10:30	Invertebrate Zool.....	a 3 b 2
1:15	Elementary Botany.....	a 2 b 3
3:15	Military.....	3

FRESHMAN

8:30	General Physics.....	a 3 b 2
9:30	French.....	a 5
10:30	Geology.....	a 5
1:15	Surveying.....	a 2 b 3
3:15	Military.....	3

SOPH

8:30	Calculus.....	a 5
9:30	Elements of Mechanism.....	a 5
10:30	Hydraulics.....	a 5
1:15	Machine Design.....	b 5
2:15		
3:15	Theme Writing.....	a 5

JUNIOR

8:30	Steam Boilers.....	a 5
9:30	Sewerage Engineering.....	a 5
10:30	Astronomy.....	a 5
1:15		
3:15	Sociology.....	a 3

SENIOR

## WINTER

Inorganic Chem.....	a & b 5
Trigonometry.....	a 5
English Literature.....	a 5
Mechanical Drawing.....	b 5
Military.....	3

Analytic Geometry.....	a 5
French.....	a 5
General Physics.....	a 3 b 2
Theory & Practice of Sur.....	a 3 b 2
Military.....	3

General History.....	a 5
Water Supply Engineering.....	a 5
Analytic Mechanics.....	a 5
Machine Design.....	b 3
{ Theme Writing.....	a 1
{ Military Lectures.....	a 1

Strains in Fr. Struct.....	a 5
Road Construction.....	a 3
Political Economy.....	a 5
Dams and Reservoir Design.....	b 2
{ Military Lectures.....	a 1
{ Experimental Engineering.....	b 4

## SPRING

Higher Algebra.....	a 5
English Classics.....	a 5
Organic Chem.....	a 4 b 1
Forging.....	b 3
Surveying.....	b 2
Military.....	5

General Physics.....	a 4 b 1
French.....	a 5
Calculus.....	a 5
Topographical Drawing.....	a & b 5
Military.....	5

Irrigation Engineering.....	a 5
General History.....	a 5
Descriptive Geometry.....	b 5
{ Theme Writing.....	a 1
{ Psychology.....	a 4

Strength of Materials.....	a 5
Railway Engineering.....	a 1 b 4
Ethics & Applied Psychology.....	a 5

## PHARMACY

## FALL

{	8:30	Inorganic Chemistry.....a & b 5
	9:30	Pharmacy Latin.....a 5
	10:30	Anatom. Methods.....a 2 b 3
	1:15	General Botany.....a 2 b 3
	2:15	
{	3:15	Military.....3

FRESHMAN

{	8:30	Materia Medica.....a 5
	9:30	Pharmacognosy.....a 5
	10:30	Pharmacy.....a 5
	1:15	Quantitative Chemistry.....b 5
	2:15	
{	3:15	Military.....3

SOPH.

{	8:30	Bacteriology.....a 2 b 3
	9:30	Geometry.....a 3
	10:30	
	1:15	Volumetric Analysis.....a & b 5
	3:15	Theme Writing.....a 3

JUNIOR

{	8:30	Latin.....a 5
	9:30	Astronomy.....a 5
	10:30	
	1:15	Adv. Rhetoric.....a 5
	2:15	Sociology.....a 3
{	3:15	

SENIOR

## WINTER

{		Inorganic Chemistry.....a & b 5
		Anatom. Methods.....a 3 b 2
		General Botany.....a 2 b 3
{		
		Military.....3

{		Materia Medica.....a 5
		Pharmacy.....a 5
		Pharmacy Laboratory.....b 5
		Chemistry of Foods.....a & b 5
{		
		Military.....3

{		General History.....a 5
		Trigonometry.....a 5
		General Physics.....a 3 b 2
		Agri. and San. Analysis.....a & b 5
		{ Theme Writing.....a 1
{		{ Military Lectures.....a 1

{		Latin.....a 5
		Political Economy.....a 5
		Elements of Geology.....a 5
		Structure & Style.....a 5

## SPRING

{		Physiology.....a 4 b 1
		Organic Chemistry.....a 4 b 1
		General Botany.....a 2 b 3
{		
		Military.....a 5

{		Materia Medica.....a 5
		Pharmacy.....a 5
		Pharmacy Laboratory.....b 5
		Drug Assaying.....b 5
{		
		Military.....5

{		General Physics.....a 4 b 1
		General History.....a 5
		Agricultural Chemistry.....a 5
		{ Psychology.....a 4
{		{ Theme Writing.....a 1

{		American Institutions.....a 5
		Latin.....a 5
		Ethics & Applied Psychology.....a 5
		Modern Essayists.....a 5

## TEACHERS COURSE

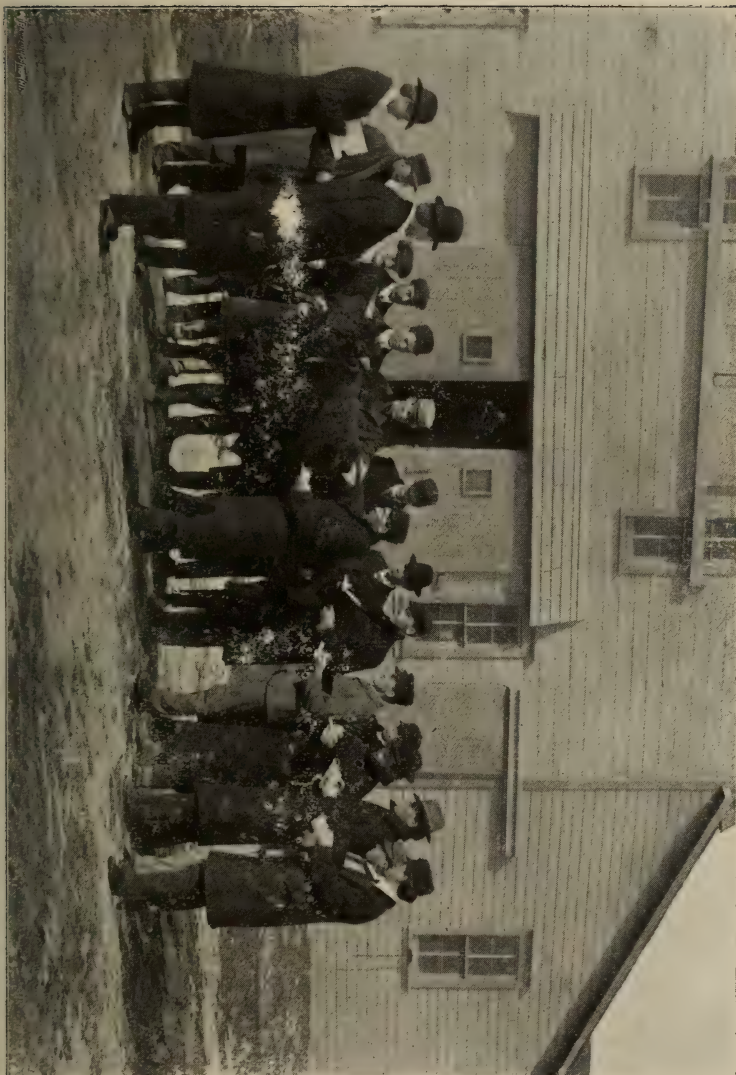
## FIRST YEAR

## WINTER

## SPRING

## FALL

8:30	Book keeping.....a 5	Algebra.....a 5	Amer. Literature.....a 5
9:30	Arithmetic.....a 5	Drawing.....a 5	Phys. Geography.....a 5
10:30	Rhetoric.....a 5	Rhetoric.....a 5	Algebra.....a 5
1:15		Civics.....a 5	Rhetoric.....a 3
2:15	Prac. Agriculture.....a 3		Mil. or Phys. Culture.....
3:15	Mil. or Phys. Culture.....	Mil. or Phys. Culture.....	
SECOND YEAR			
8:30	El. Physics.....a 3 b 2	General History.....a 5	El Physics.....a 4 b 1
9:30	Horticulture.....a 3	El Physics.....a 3 b 2	General History.....a 5
10:30	Algebra.....a 5	Eng. Literature.....a 5	Landscape Garden.....b 2
1:15	El. Botany.....a 2 b 3	Carpentry or Sew.....b 3	
2:15		Military or Physical Culture....	{ Psychology .....a 4
3:15	Military or Physical Culture...		{ Military or Physical Culture..
THIRD YEAR			
8:30	Eng. History.....a 5	Geometry.....a 5	Amer. Institutions.....a 5
9:30			Geometry.....a 5
10:30	Invert. Zoology.....a 2 b 3	Am History.....a 5	Commercial Law....a 5
1:15		Meth. of Teaching.....a 5	{ Theme Writing.....a 1
2:15	History of Education.....a 5	{ Theme Writing.....a 1	{ Mil or Phys. Culture, .....a 1
3:15	{ Theme Writing.....a 3	{ Mil. or Phys. Culture.....	
	{ Mil. or Phys. Culture.....		



CLASS IN STOCK JUDGING



## Departments and Work

---

### The Agricultural Experiment Station (Ex.)

JAMES W. WILSON, DIRECTOR.

Under the provisions of the Hatch Act, of March 2, 1887, the state receives \$15,000 annually, from the treasury of the United States for the maintenance of an Experiment Station. By an act of the legislature this institution was made a part of the South Dakota Agricultural College. Its object is to conduct investigations along agricultural lines, publish the results in bulletin form and distribute them to the residents of the state for their information and benefit. It consists of five divisions, namely, Agriculture, Horticulture, Chemistry, Botany and Entomology, and Veterinary.

Each of these divisions is in charge of an expert who is also the professor of the same subject in the College.

About sixty acres of the College Farm are set aside for experiments in crop rotations and soil moisture determinations.

Another sixty acres are utilized for the purpose of experiments in horticultural lines, where trees, shrubs and vines are grown in profusion. Co-operation with the United States Department of Agriculture in the adaption of grains, grasses, forage plants, fruits, trees, shrubs and vegetables for the Northwest, is being carried on, and as a result many valuable varieties have been introduced which probably would not otherwise have reached us.

Each division is provided with the proper facilities, by the state, to conduct investigations and at least four bulletins are published annually, which are free to the residents of the state. Queries pertaining to the various agricultural interests are answered promptly. The regular bulletin mailing list of the Station numbers over 10000

names. All communications to this department should be addressed to the Director.

---

Department of Agriculture  
(Ag.)

PROFESSOR WILSON, MR. SKINNER, MR. WHEATON AND MR. COLE.

This department includes the Farm, Dairy and Animal Husbandry divisions.

The instruction given in each division is made as practical as possible, to fit the student better for solving the every day problems of farm life. New grains and forage crops are grown under field conditions and are used in feeding experiments for the economical production of beef, mutton, pork and dairy products.

The college flocks and herds include representatives of fifteen of the leading breeds of domestic animals. Practical work is given daily in score card practice to enable the student to distinguish between the poor and the good, and the good and the fancy kinds of animals, an acquirement necessary for the successful handling of live stock.

In the dairy the student is taught the operation of dairy machinery, and the best methods of making fancy butter and cheese by actually doing the work. A representative herd of dairy cows is kept to furnish milk for the dairy and to afford the student an opportunity to make comparisons as to performance and individual characteristics.

The following is the work offered.

- 1 F.—Elements of Dairying, b 3, 1:15–3:15. Mr. Wheaton. b, A study of the composition of milk, the operation of the different kinds of separators and the testing of milk.  
Elements of Dairying, by Decker.  
Testing of Milk and its Products, by Farrington and Woll.
- 2 W.—Dairying, b 2, 1:15–3:15. Mr. Wheaton.  
b. Continuation of the Fall term's work.
- 3 F. { 10:30–11:30 } Prof. Wilson and Mr.  
W—Stock Judging, a 5 { 9:30–10:30 } Skinner.  
S. { 10:30–11:30 }  
a, Instruction in selecting animals for breeding purposes, detection of unsoundness and blemishes. proper conformation, show yard work and the use of the score card.
- 4 F.—Stock Judging, a 3, 9:30–10:30. Mr. Skinner.  
a, Study of horses and swine for students in special course in agriculture.



FARM MECHANICS LABORATORY

- 5 W—Stock Judging, a 2, 1:15-2:15. Mr Skinner.  
a, Study of cattle and sheep for students in special course in agriculture.
- 6 S.—Cheese Making, b 3, 1:15-3:15. Mr. Wheaton.  
b, Process of making cheese under farm and factory conditions  
Cheese Making, by Decker, Lectures.
- 7 S.—Breeds of Live Stock, a 2, 1:15-2:15. Prof. Wilson.  
Pre. 3.  
a, Study of the various breeds, their origination, characteristics, improvement, adaptability to different climates, and the best kind for special purposes.
- 8 W.—General Agriculture, a 9:30-10:30. Prof. Wilson, Mr. Skinner  
Pre. 3.  
a, How crops grow, preparation of seed bed, cultivation, harvesting, marketing, etc.  
Storer's Agriculture.
- 9 Stock Breeding, a 2, 2:15-3:15. Prof Wilson and Mr. Skinner.  
a, Lectures and references on the laws of reproduction The result of cross-breeding, in-breeding, etc. A study of pedigrees.  
Miles' Stock Breeding and References.
- 10 S.—Advanced Dairying, b 3, 1:15-3:15 Mr Wheaton  
b, Instruction in the making of fancy cheese, such as the Edam, Gouda, Brick and others.  
Lectures and Laboratories.
- 11 W—Stock Feeding, a 2, 8:30-9:30. Prof. Wilson, Mr Skinner  
a, Laws of nutrition, expenditure of energy, balanced rations, composition of feeding stuffs A comparison of the results of feeding experiments at the various stations, finishing for the market and the economical handling of live stock under South Dakota conditions.  
W. A. Henry's Feeds and Feeding and References
- 12 S—Stock Feeding, a 3, 8:30-9:30. Prof. Wilson, Mr. Skinner.  
a, A continuation of Course II
- 13 S.—Dairying, b 5, 9:30-11:30 Mr. Wheaton.  
b, Courses I and II combined.
- 14 F.—Soil Physics { a 2, 8:30-9:30 } Mr. Cole.  
                              { b 3, 8:30-9:30 }  
Pre Ph. 4 and 5  
a, Physical properties of the soil, supply of food to the growing plant, soil moisture, soil temperature, tillage, nutrition, wells, irrigation.  
b, Mechanical analysis of soils; organic matter, moisture and specific gravity demonstrations; capillarity and water holding capacity of various soils; measure of the flow of water and the passage of air through soils; the effect of mulching and tillage upon the conservation of moisture  
Physics of Agriculture, King; Lectures, References, Notebook.
- 15 W.—Farm Crops, a and b 5, 10:30-12:00. Mr. Cole.



a, The classification, improvement, culture, harvesting, uses, history and geographical distribution of crops.

b, Laboratory work in grain grading, cleaning and treating, and corn judging.

Cereals in America, Hunt, Lectures, References, Notebooks.

16 W.—Farm Mechanics, a 3 b 2, 2:15-4:15. Mr. Cole.

Pre 4.

b, Principles of draft, roads; farm motors, horse power, engines, windmills; farm machinery, friction pumps. Laboratory work with models and apparatus for measuring draft, examination and tests of farm machinery and implements.

Physics of Agriculture, King; Lectures, Notebooks.

#### SPECIAL SIX WEEKS' COURSE IN AGRICULTURE

(From Jan. 2 to Feb. 15, 1907)

This course is offered to accommodate those, young and old, who cannot avail themselves of the opportunities offered in the long courses. It will cover a period of six weeks and there will be no entrance examination required. The work will consist of lectures, recitations, demonstrations and practical laboratory exercises in the following subjects: Stock judging, farm methods and implements, crop rotation, corn judging, seed selection and breeding, diseases, of domestic animals and their treatment, insects injurious to farm crops and the elements of horticulture, including the cultivation and propagation of vegetables, fruits, trees and shrubs.

#### THE SPECIAL BUTTER-MAKERS' COURSE

(From January 2 to March 20, 1907)

The development of the dairy interest throughout the state has been very rapid during the past few years, calling for a larger number of technical and experienced operators of factories, especially expert butter-makers, and men who are competent to advise and direct dairy farmers in the care and management of dairy herds, care and management of milk, etc.

This course is designed to fit young men for creamery operators and managers.

The work embraces the care of dairy cows, stables, milk and dairy utensils; the ripening of cream, pasteurization and sterilization of milk; the discussion and practice of ripening cream with pure and natural culture together with all the latest practical methods of successfully operating a creamery.

The following work is offered :

General Agriculture and Care of Dairy Cows, a 5 .....	8:30
Dairy Lectures, a 5 .....	9:30
Dairy Arithmetic, a 3.....	10:30
Dairy Engineering, a 2 .....	10:30
Lectures in Botany, Entomology, Horticulture and Zoology, a 3, optional.....	3:15
Book keeping, a 3 .....	1:15
Practical Butter-Making, b 5.....	2:15
Bacteriology, a 2 .....	1:15

On successfully completing the term's work offered, the student is entitled to a certificate of efficiency as helper in a creamery, and upon completing a full season's work as helper satisfactorily to the butter-maker and manager, with their recommendation, he may receive a certificate of competency to operate a creamery.

#### COURSE IN DOMESTIC DAIRYING

(From Sept. 4 to Dec. 1, 1906)

This course is offered to special students (young men and women) who desire to become proficient in the art of home dairying, how to make butter and cheese on the farm or in private dairies, the care and management of the same, etc. Completion of this work entitles the student to a certificate of competency to manage a dairy farm or private dairy. The following work in the various courses is offered :

Care and Management of Dairy Cows, a 5.....	8:30
Testing Dairy Products, a2 b 3.....	9:30
Practical laboratory work in butter and cheese making, as applied to home and farm dairying, b 5. ....	1:15
Care and management of hand separators and other modern dairy apparatus, b 5 ....	3:15
Dairy Bacteriology, a 2.....	3:15

#### SPECIAL CHEESE-MAKERS' COURSE

(Special Work in Dairy Science, March 5 to June 13, 1907)

Recently there has developed a desire on the part of the dairy farmer in some localities to engage in the manufacture of cheese. A SPECIAL CHEESE-MAKING COURSE IS OFFERED embracing the manufacture of Young America's Edam, Gouda, Brick and other styles of fancy cheese and the regular American Cheddar factory and flats.



IN THE ART ROOM

The following work is offered :

Dairy Lectures, a 5.....	8:30
Dairy Arithmetic, a 3.....	9:30
Dairy Engineering, a 2.....	9:30
Book-keeping, a 3 ... ..	10:30
Practical Cheese-Making, b 5 .....	1:15
Dairy Bacteriology, a 2.....	1:15

On completion of the work the student will receive a certificate of proficiency as assistant or helper in a cheese factory under a competent and practical cheese-maker, but after obtaining a position as such, the student will be required to report to the dairy instructor every month. Upon completing a full season's work as helper satisfactorily to the cheese-maker and manager, with their recommendation he may receive a certificate of efficiency to operate a cheese factory.

---

### Department of Art

(Ar.)

MISS CALDWELL AND MISS GODDARD

The aim of the work in the Art Department is to train the eye and hand to give free expression to ideas; to develop observation, reflection and interpretation. Attention is given to drawing and modeling from casts and objects for thorough study of form; painting in oil and water color from nature for appreciation of color; sketching from nature in black and white, and in color to give material from which to construct original designs. Practical application of the principles of decoration is given by work in wood-carving and pyrography and designing for art needlework for the Domestic Science department.

A certificate is given students who satisfactorily complete the art course as outlined. Course 1, for two years; Courses 2, 3, 4, 5, 6 one year each.

- 1     $\left. \begin{array}{l} \text{F.} \\ \text{W.} \\ \text{S.} \end{array} \right\} \text{Drawing, b 3, 1:15-3:15.}$

b, This course offers work in full values from casts and still life, giving discipline in proportion, construction, and values. It trains the eye to see accurately and the hand to be a skillful tool in expressing thought.





THE BOTANICAL LABORATORY

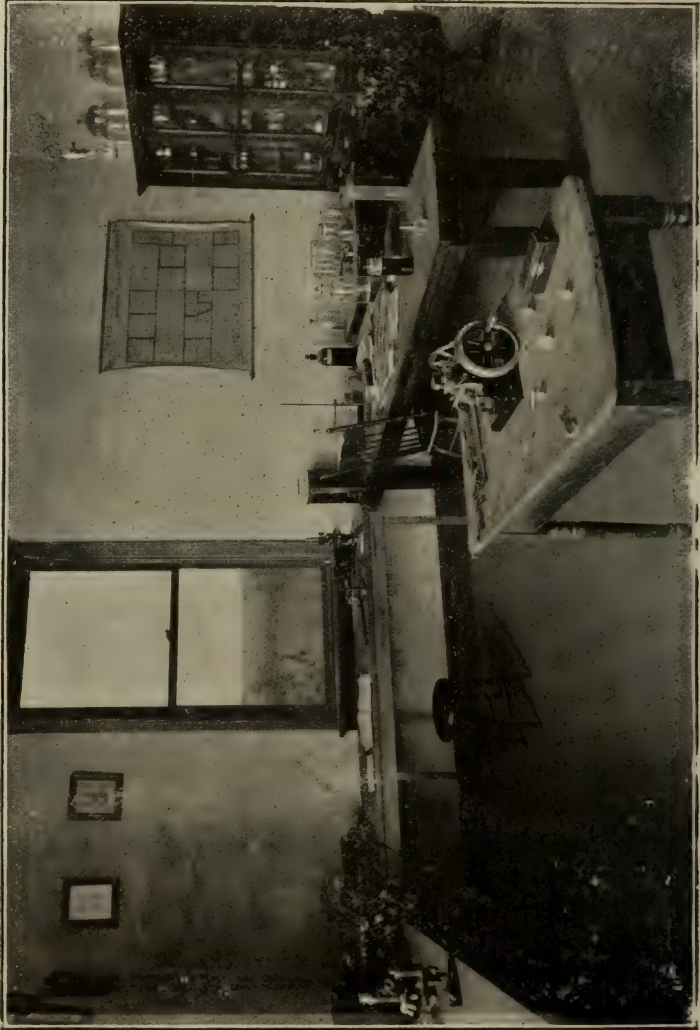
- 2 F. } Applied Free Hand Drawing for work in Public Schools, a 5.  
W } 9:30-10:30.  
S }
- a, This course includes object drawing in pencil and charcoal, blackboard sketching, elementary color, elementary design as applied in basketry, clay modeling, and illustrations for children's lessons. It aims to give students a course they can apply in teaching in public schools.
- 3 F. } Theory and Practice of Design, a 3, 10:30-11:30  
W }  
S }
- a, This course includes study of line, spot, value, color, and their application in design. It trains the eye to appreciate good proportion and line and color harmony. Practice in carrying out designs is given in the Domestic Art Course and in the Handicraft Course.
- 4 F. } History of Art, a 2, 8:30-9:30.  
W }  
S }
- a, This course takes up the study of art historically. Some of the masterpieces in architecture, sculpture, and painting are studied and discussed.
- 5 F. } Oil Painting, b 1, 1:15-3:15.  
W }  
S }
- b, Students in this class, work from still life for study of color, values, and tone.
- 6 F. } Handicraft, b 1, 1:15-3:15.  
W }  
S }
- Pre. Ar. 1 and 3.
- b, This course deals with the problems of design carried out in wood carving, basketry, pyrography.
- 7 F. } Theory of Design, a 2, 10:30-11:30.  
W }  
S }
- a, This course treats of the theory of design in line, mass and color in its application in the home.

---

Department of Botany  
(Bt.)

PROFESSOR W. A. WHEELER.

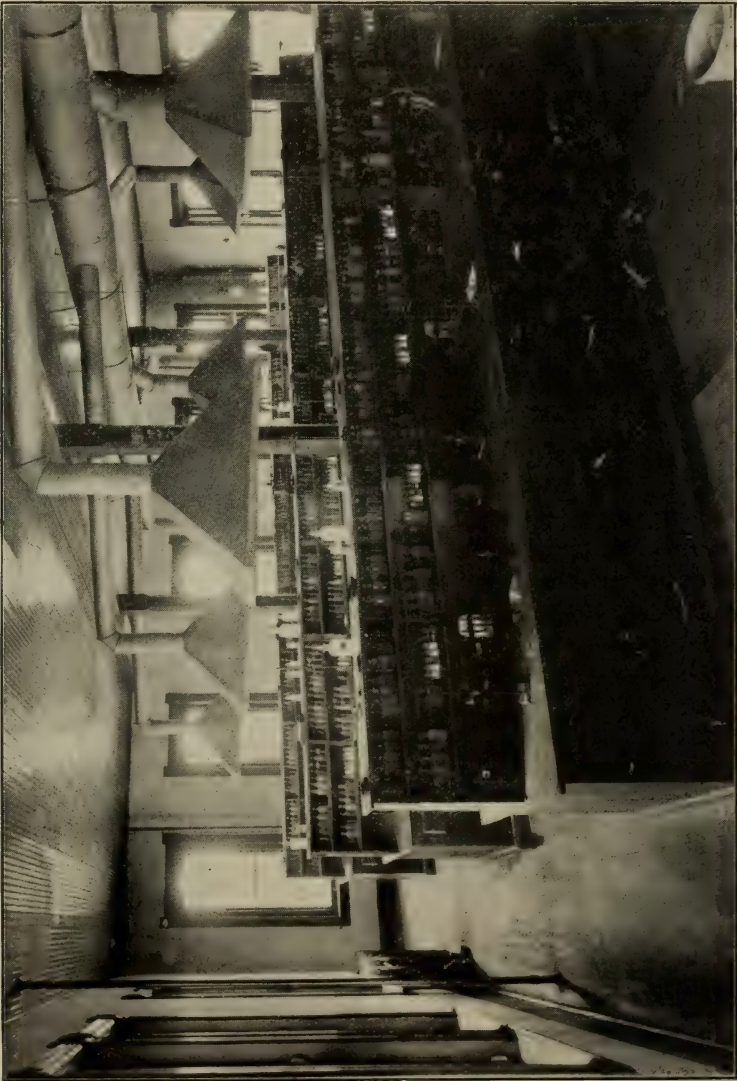
The work in Botany is arranged to give the student a thorough knowledge of plant life. The Botany department occupies the second floor of the "Plant Breeding Building." It is provided with all the apparatus necessary for biological work, including microtome, microscopes and physiological apparatus.



ADVANCED BOTANICAL LABORATORY

- 1 F } { a 2, 2:15-3:15 }  
           { b 3, 1:45-3:15 }
- 2 W } General Botany { a 2, 2:15-3:15 }  
           { b 3, 1:45-3:15 }
- 3 S. J } { a 2, 8:30-9:30 or 2:15-3:15 }  
           { b 3, 8:00-9:30 or 1:45-3:15 }
- Laboratory work and lectures. A general survey of the plant kingdom with lectures and laboratory work on morphology, physiology and systematic botany.  
 Atkinson's College Botany
- 4 F.—Elementary Botany. { a 2, 1:15 2:15 }  
                                   { b 3, 1:45-3:15 }
- Laboratory work and lectures. A study of the elements of plant structure with lectures and laboratory work on anatomy and physiology.
- 5 F —Pharmacognosy, a 5, 9:30-10:30.  
 Pre. 1.  
 Laboratory work and recitations. Families of medicinal plants; histology of the important drugs; study of the glands, reservoirs or receptacles of the essential parts of the drugs.  
 Kraemer's Botany and Pharmacognosy.
- 6 F. { Mycology { a 1 b 4, 9:30-11:30 }  
 7 W } { a 1 b 4, 9:30-11:30 }
- Pre. 1, 2 and 3.  
 Laboratory, lectures and reference work. A study of the more important groups of fungi. Especial attention will be paid to those parasitic upon economic plants.
- 8 S.—Entomology { a 3, 9:30-10:30 }  
                           { b 2, 9:30-11:30 }
- Pre. Zo 1 and 2.  
 Lectures and laboratory work. A brief survey of the group of insects with a study of the life history of several types. Attention will also be given to the combatting of insects destructive to economic plants.
- 9 F. )  
 W ) Experimental Plant Physiology, a 1 b 4, 9:30-11:30.  
 S. )
- Pre 1, 2 and 3.  
 Laboratory and reference work. A series of experiments treating of plant functions, with references to important literature bearing upon the subject.  
 McDugal's Text-Book of Plant Physiology
- 10 F )  
 W ) Taxonomy, a 1 b 4, 8:00-9:30.  
 S )
- Pre. 1, 2 and 3.  
 Laboratory and reference work. A systematic study of any one of the following groups:  
 (a) Liverworts and Mosses:  
 (b) Ferns, Clubmosses and Scouring Rushes.





CHEMICAL LABORATORY

(c) Gymnosperms and Angiosperms.

11 W—Botanical Microtechnique, b 5, 8:00-9:30.

Pre 1, 2 and 3.

b. Laboratory and reference work. Instruction in the use of the finer laboratory apparatus. Methods of scientific research.

Zimmerman's Botanical Microtechnique.

---

Department of Chemistry  
(Ch.)

PROFESSOR SHEPARD; MR. NORTON

This department is equipped with the latest and most approved appliances for instruction.

The student upon beginning the subject is assigned a desk in the main laboratory. This desk is supplied with a set of reagent bottles, gas and water fixtures. In addition to these a supply of all needful apparatus, such as test tubes generating flasks, and the like are furnished. The main laboratory, which is located on the first floor of the Chemistry and Pharmacy building, accommodates sixty-four students all working at the same time.

Upon completing the necessary elementary work the student now finds a quantitative laboratory at his disposal. This laboratory accommodates twenty students working together. It is supplied with all quantitative apparatus such as precipitation flasks, desiccators, lamps and crucibles.

In connection with the quantitative laboratory is a balance room supplied with high grade Trömer quantitative balances. The work is so planned that the student has laboratory work together with didactic instruction throughout the course.

The experiment station laboratories are also located at this College, and their costly and technical appliances and the practical work in constant progress there are within reach for instruction.

The following courses are offered:

1 F.—Descriptive Inorganic Chemistry, a and b 5. 8:30-9:30 Prof. Shepard, Mr Norton.

Pre Ph. 3 and Ms. 5

a, History of chemistry, elements, compounds, symbols, valence. atomic weights, chemical equations, oxygen, hydrogen, nitrogen, chlorine, bromine, fluorine, iodine, sulphur, phosphorus. silicon and their compounds. Bases, salts, acids and alkalies.



cultural Chemists

- 8 S.—Agricultural Chemistry, a 5 Prof. Shepard.

Pre. 7

Johnson's Agricultural Chemistry.

- 9 S.—Industrial Chemistry, a 5, 8:30–9:30. Prof. Shepard

Pre. 4.

a, Chemistry of manufacturing glass, paper, sugar, petroleum, explosives, acids, water, air, mortars, pigments, photography, alkalies and gasses. Demonstrations of examples including water pollution purification, artificial illumination, petroleum testing, fermentation, air contamination, disinfection, ventilation, bleaches and dyeing.

### Department of Civil Engineering (Ce.)

#### PROFESSOR CRANE

The aim of the work in this department is to impart a practical knowledge of the principles of land surveying, municipal and sanitary engineering and road construction. Irrigation and drainage are studied from the engineers point of view, also the elementary principles of railway construction.

The surveyor's instruments are placed in the student's hands at once and their use, care and adjustments are learned from actual experience as well as the theoretic study of the text.

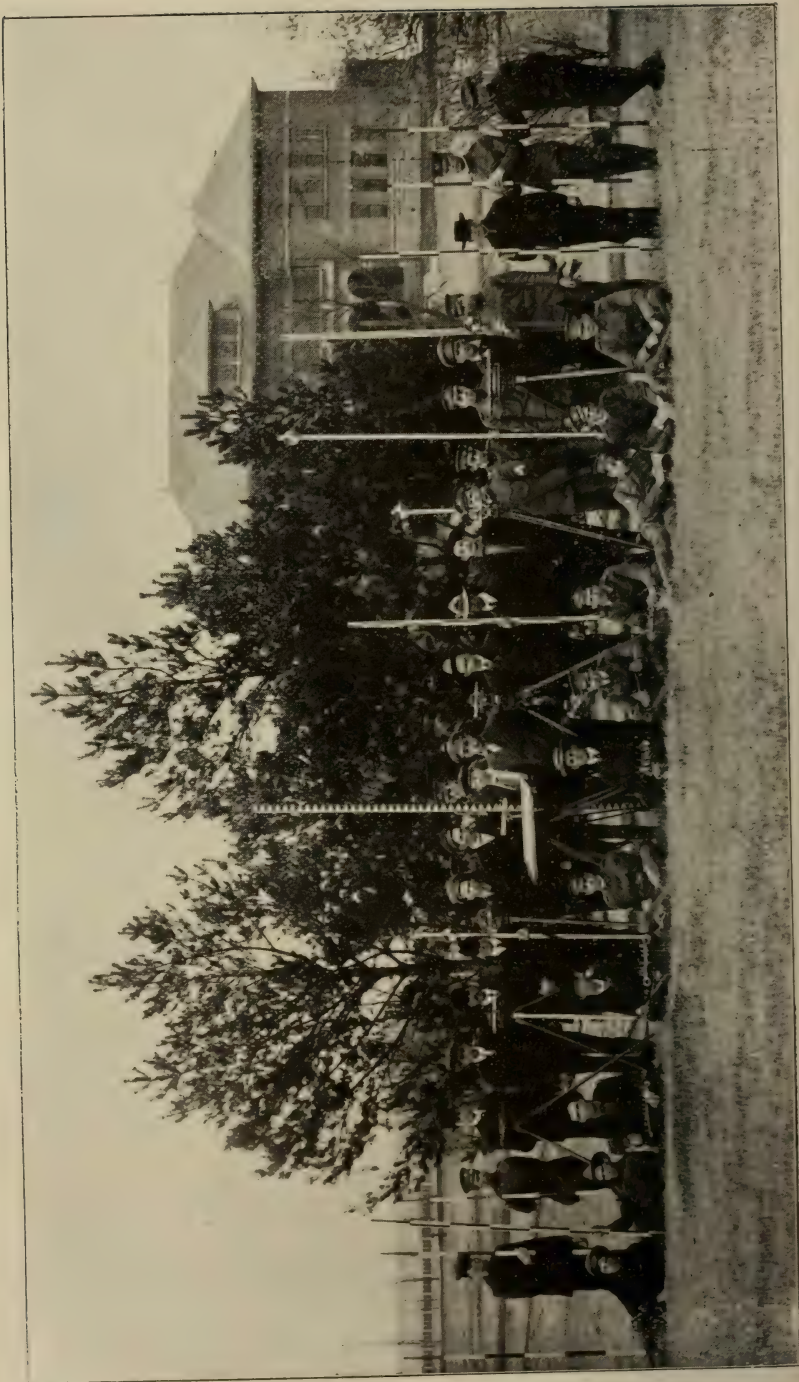
The use of manuals, tables and the graphic representation of fields and areas are studied in detail.

The use and distribution of water in growing crops will be studied, the principles of irrigation being supplemented by laboratory and field work.

The following courses are offered :

- 1 S.—Surveying, b 2, 1:15–3:15.  
b, Field practice in the use of surveying instruments; computations from field notes; plotting of surveys.  
Text, Johnson's Theory and Practice of Surveying.
- 2 F.—Surveying, a 2 b 3, 1:15–3:15.  
a, Continuation of course I.  
b, Levelling and profile work; use of solar apparatus.  
Plotting.
- 3 W.—Theory and Practice of Surveying, a 3 b 2, 1:15–3:15.  
a, Lectures on history and methods of government surveys; study of manual and laws governing surveys.  
b, Office work in computation; drawing profiles; computing cut and fill to grades.





CIVIL ENGINEERING CLASS

- 4 S. Topographical Surveying, a and b 5, 1:15-3:15.  
a and b. Survey and representation of the topographic features; use of plane table, location of irrigation and drainage ditches, etc.
- 5 F.—Hydraulics, a 5, 10:30-11:30.  
a. Study of flow of water and formulas for computation; water measurements; weirs and meters; coefficients of resistance.  
Merriman's Hydraulics.
- 6 W. Water Supply Engineering, a 5, 10:30-11:30.  
a. General study of water supply, purification and distribution; source of supply; method of storage; pumps and pumping.  
Text, Turneaure and Russel, Water Supply.
- 7 S. Irrigation Engineering, a 5, 8:30-9:30.  
a. Study of the development of irrigation from the earliest times; present application; use and distribution of water; location of reservoirs and canals.  
Wilson's Irrigation Engineering.
- 8 F.—Sewerage Engineering, a 5, 9:30-10:30.  
a. Study of the drainage and disposal of storm and sewerage waters; design and maintenance of sewer systems; purification of sewage.  
Text, Folwell's Sewerage.
- 9 W.—Dam and Reservoir Design. b 2, 1:15-3:15.  
b. Study of design of dams and reservoirs for storage purposes, computation of capacities, pressures, gates, etc.
- 10 W.—Road Construction, a 3, 9:30-10:30  
a 3, Principles, methods and materials used in construction of roads and pavements; establishing grades; locating culverts and bridges; improvement of rural roads.  
Text, Baker's Road Construction.
- 11 S.—Railway Engineering, a 1 b 4, 9:30-11:30  
a. General principles of railway location and construction.  
b. Location of lines; curves; computation of volumes

---

#### Department of Commercial Science

(Cl.)

PROFESSOR CROSIER.

The Commercial department occupies commodious quarters on the second floor of the central building. Its rooms are exceptionally well suited to the work of the department and supplied with tables, typewriters, offices for carrying on business transactions, such as banking, mercantile and post office work. There are two distinct courses of study offered in this department, each extending over a period of one year; the amanuensis or shorthand course, and the business or commercial course. When the student has satisfactorily

completed either course he will be given a certificate of graduation. The applicant for graduation in the amanuensis course must obtain a speed, from general matter, of one hundred words per minute, and transcribe the same on the machine at the rate of thirty-five words per minute. He must also show a thorough proficiency in his spelling, use of punctuation marks and other rules of composition and rhetoric. Penmanship and business letter writing, while not scheduled as a part of the regular course, are given particular emphasis throughout the year.

The admission requirements to the work of this department are the same as those of the Freshman class. It is both a waste of time and money to study shorthand and business branches before having formed the habit of correct spelling and neatness in written exercises.

The expenses are the same as for any other work in the institution and far below what is usually charged for such instruction. College charges per term of twelve weeks are FIVE DOLLARS which includes the use of a typewriter.

The work is as follows:

---

#### AMANUENSIS COURSE

(Fall Term.)

- 1 Shorthand, a 5, 2:15-3:15. Prof. Crosier.  
a, Consonant stems, vowels, diphthongs, initial and final hooks and circles, word signs, etc., in logical order. Elimination of vocalization through position; the habit of co ordination emphasized from the beginning.  
Day's Shorthand Manual.  
Ln. 10. French, a 5, 9:30-10:30. Prof. Wheeler.  
For description of course see department of Modern Languages.
- 2 Typewriting, 5. Prof. Crosier  
b, Graded exercises on machine to learn key board by touch method; care of machine; business letters, law forms, manifold ing, mimeographing; department correspondence, speed practice, binding, folding and filing in all kinds of typewritten matter. One hour each day.  
Any Standard Typewriting Manual.
- 3 Elementary Law, a 5, 10:30-11:30. Professor Crosier.  
a, A course of study designed to acquaint the student somewhat with those fundamental principles underlying our specific law; thus enabling him to pursue more intelligently legal analysis

Blackstone and Walker's American Law used as reference study.  
Robinson's Elementary Law.

4 Commerce, a 5, 1:15-2:15. Prof. Crosier.

a, This course is intended to give the student a practical knowledge of commercial conditions and methods and thus enable him to better apprehend business.

Clow's Introduction to Commerce.

Military or Physical Culture, 3:15-a:14.

WINTER TERM.

5 Shorthand, a 5, 2:15-3:15. Professor Crosier.

a, Direct dictation of business letters; study of reporting word signs and contractions; copying from short-hand outlines. This three fold purpose is to enable the student to combine accuracy of outline with facility of hand.

Musick's Universal Dictation.

Graham's I. C. R.

Ln. 11. French, a 5, 9:30-10:30. Professor Wheeler.

For description of course see department of Modern Languages.

6 Typewriting, 5. Professor Crosier.

b, Continuation of work of fall term. One hour each day. Student required to transcribe all work taken in shorthand.

7 Commercial Law, a 5, 10:30-11:30. Professor Crosier.

a, A topical analysis of Contracts. Negotiable Paper, Agency, Partnership and Corporations. An abstract of the term's work is given and the student is expected, by means of class lectures, collateral reading and code study, to develop the outline and thus be able to apply in a practical way the acquired information.

Townsend's Compendium of Commercial Law.

8 Economics, a 5, 1:15-2:15. Professor Crosier.

a, Continuation of 5. A more comprehensive study of the principles of economics; laws regulating production and exchange of commodities. A term paper on some assigned topic is required of each student.

Bullock's Introduction to the Study of Economics.

Military or Physical Culture, 3:15-4:15.

SPRING TERM

9 Shorthand, a 5, 10:30-11:30. Professor Crosier

a, General dictation from Brown's Business Correspondence. Humphrey's Typewriting Manual. Law forms of all kinds. The aim of this term is to complete the student's preparation for actual work.

Ln. 12. a 5, 9:30-10:30. Professor Wheeler.

a, For description of course see department of Modern Languages

10 Typewriting, 5. Professor Crosier.

b, One hour each day. All work of this term to be from short hand notes. The purpose of this is to give the student the power



to read notes readily and transcribe same rapidly. A speed of thirty five words per minute from shorthand outlines is required for graduation.

- 11 Economics, a 5, 1:15-2:15. Professor Crosier.  
a, Completion of 8. The effort here is to further develop the various economic theories and their practical bearing on our industrial activities. Term topic required of each student Bullock's Introduction to the Study of Economics.
- 12 Commercial Law, a 5, 2:15-3:15. Professor Crosier.  
a, Continuation of 7. Guaranty, Sale of Chattels, Right of Stop page in Transit, Payment, Law of Tender. Liens. Interest and Usury, Contracts of Affreightment, Bailments. Marine. Fire and Life Insurance, Arbitration, Probate Matters, Real Estate Conveyances. A complete originally developed outline is required in both 7 and 12.  
Military or Physical Culture, 3:15-4:15.

#### BUSINESS COURSE—FALL TERM.

- Ln. 10 French, a 5, 9:30-10:30. Professor Wheeler.  
a, For description of course see department of Modern Languages.
- 3 Elementary Law, a 5, 10:30-11:30 Professor Crosier.  
a, For description of work see Amanuensis Course.
- 4 Commerce, a 5, 1:15-2:15. Professor Crosier.  
a, For description of work see Amanuensis Course.
- 2 Typewriting, 5. Professor Crosier.  
b, One hour each day. For description see Amanuensis Course.  
Military or Physical Culture, 3:15-4:15.

#### WINTER TERM.

- 13 Business Practice, a 5, 2:15-3:15. Professor Crosier.  
a, Each student carries on regular retail business, through six offices, with the student body. While all transactions are of the same general nature the results are different, thus creating in the individual student the habit of self reliance. All work must be of a certain degree of excellency before the next step can be taken. This term's work comprises four hundred different transactions, together with the necessary letters, checks, drafts, notes, etc., that would naturally attend the same in actual business.  
Ln. 11. French, a 5, 9:30-10:30. Professor Wheeler.  
a, See department of Modern Languages.
- 14 Commercial Arithmetic, a 5, 8:30-9:30. Professor Crosier.  
a, Short methods in addition, subtraction, multiplication and division, rapid calculation in percentage, interest discount and ordinary arithmetical processes.
- 7 Commercial Law, a 5, 10:30-11:30. Professor Crosier.  
a, For description of work see Amanuensis Course.
- 8 Economics, a 5, 1:15-2:15. Professor Crosier.  
a, For description of work see Amanuensis Course.  
Military or Physical Culture, 3:15-4:15.

## SPRING TERM.

- 15 Business Practice, a 5, 10:30-11:30. Professor Crosier.  
 a, Business practice, changing work of previous term into whole-sale and commission business. All transactions are carried out by students with outside colleges, thereby approaching, as nearly as possible, actual business.  
 Goodyear's System of Business.  
 Ln. 12. French, a 5, 9:30-10:30. Prof. Wheeler.  
 a, See department of Modern Languages
- 11 Economics, a 5, 1:15-2:15. Professor Crosier.  
 a, For description of work see Amanuensis Course.
- 12 Commercial Law, a 5, 2:15-3:15. Prof. Crosier.  
 a, For description of work see Amanuensis Course.  
 Military or Physical Culture, 3:15-4:15.

## Department of Domestic Science

(Ds.)

## MISS WARDALL AND MISS THORNBUR.

The department of domestic science stands for a better appreciation and a wider knowledge of the things that make for better homes. While the work is essentially scientific in character, the course has been planned with due regard to cultural needs. The department is very favorably located, occupying an entire floor, and is well equipped for the various lines of work. Charts and exhibits illustrating the chemical compositions of food are found in the class room; general reference books and magazines are found in the general library.

- 1 F. } Sewing, b 3, 1:15-3:15. Miss Thornber.  
 S. }

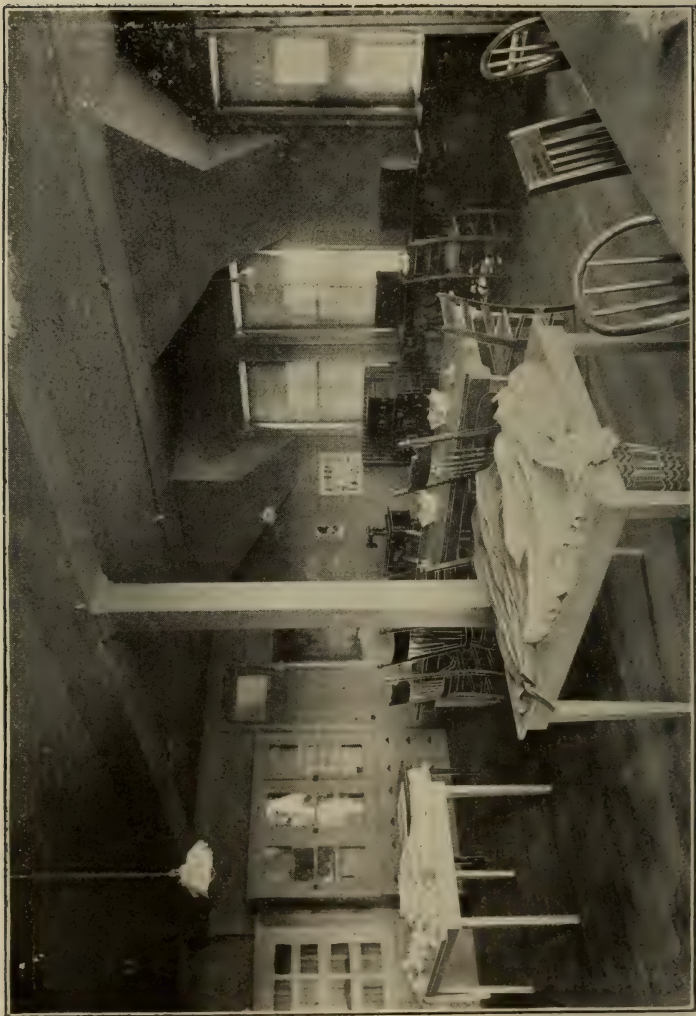
b, This course aims to give students an understanding of the stitches and methods employed in plain sewing. Each student is required to make a suit of underwear. This course or its equivalent is a necessary prerequisite to any other course in needlework offered in the department.

- 2 F. } Sewing, b 3, 1:15-3:15. Miss Thornber.  
 S. }

Pre. 1.

b, Plain dressmaking, drafting, cutting, fitting and general dress-making. The aim is to give the necessary training to enable the student to do home dressmaking. Each student is required to make a shirt waist suit.

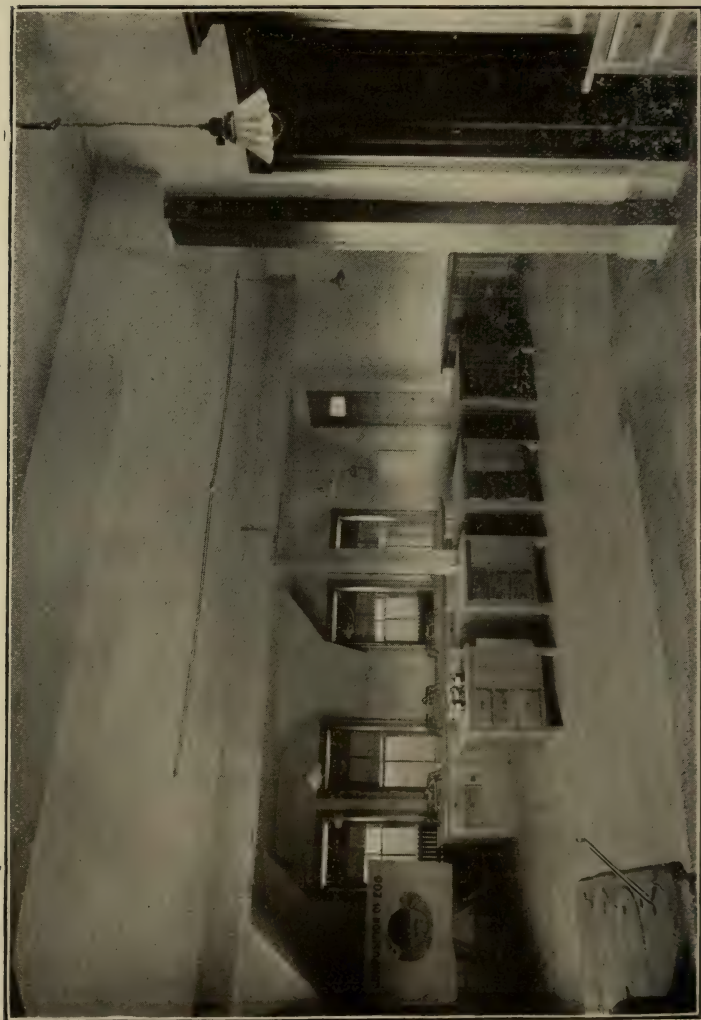
The Vienna Tailoring System is used.



DOMESTIC SCIENCE SEWING ROOM

- 3 W.—Sewing, b 3, 1:15–3:15. Miss Thornber.  
For Short Course students.  
b, The work will include plain sewing, dressmaking and needlework. It will be adapted to the needs and abilities of the individual student.
- 4 F. { Sewing, b 3, Art Needlework. 1:15–3:15. Miss Thornber.  
S. {  
Pre. 1.  
b, Principles underlying drawn work, lace making as Battenberg, point lace, crocheting, knitting, tatting, embroidering. A deposit of two dollars is required in this course. Any part of this which is not expended for materials will be refunded at the close of the term.
- 5 W.—Household Economy, a 3, 8:30–9:30 Miss Wardall.  
a, The aim of this course is to set forth some of the principles underlying housekeeping, including the organization of the household, chemistry of cleaning, laundry work, serving of foods and marketing.
- 6 S—General Hygiene, a 3, 8:30–9:30. Miss Wardall.  
a, References and lectures are given concerning personal and public hygiene, sanitary and unsanitary conditions in the house, necessary precautions against the spread of disease.
- 7 S.—Selection and Preparation of Food, a and b 3, 1:15–3:15. Miss Wardall.  
Pre Ch. 3, Bt. 3, Ph. 3.  
Food principles, effect of heat, occurrence in food stuffs. Cooking and serving of typical foods. Reference, lecture, and laboratory methods combine.
- 8 F.—Selection and Preparation of Food, a and b 5, 9:30–11:30. Miss Wardall.  
Pre. 7.  
Continuation of 7.
- 9 F.—Household Sanitation, a 3; 8:30–9:30. Miss Wardall.  
a, By references and lectures the following subjects are considered: Situation of the house with regard to soil, drainage and general surroundings, building materials, general arrangement of rooms, water supply, plumbing and heating arrangements. Exercises are given in making skeleton house plans.
- 10 W.—Home Nursing and Invalid Cookery, a 2, 8:30–9:30. Miss Wardall.  
Pre. 8, Zo. 3.  
a, This course deals with the care of sick in the home and the preparation of food for them. A few lectures are usually given by a physician.
- 11 S.—Fabrics, a 2, 9:30–10:30. Miss Wardall.  
Pre. Ch. 3. Bt. 3.  
a, Primitive industries such as basketry, spinning and weaving. Fibres used in making fabrics, their preparation and manufacture.





DOMESTIC SCIENCE KITCHEN

Uses for which various fabrics are adapted.

- 12 S.—Dietetics, a and b 3, 9:30–11:30. Miss Wardall.  
Pre. 8.

The course consists of reference, lecture and laboratory work. Standard dietaries examined. Practical dietaries made in the laboratory. Menus worked out according to different standards. Especial emphasis put on the economic side.

- 13 F. { Cooking, b 2, 1:15–3:15. Miss Wardall.  
W. }

For Short Course and sub-freshman students.

b, The course will consist of lectures, experiments and practical cooking. Subjects to be determined.

#### SHORT COURSE IN DOMESTIC SCIENCE

During the winter term a course is offered to any young ladies who may wish to elect it. The object of this course is to awaken a greater interest in the affairs of the home. Sufficient training is offered to make the work practical as well as suggestive to them in the household.

Floriculture and Home Gardening, a 5.....	8:30–9:30
Household Economy, a and b 3.....	9:30–11:30
Cooking, b 2.....	1:15–3:15
Sewing, b 3.....	1:15–3:15
Music and Art if desired.	

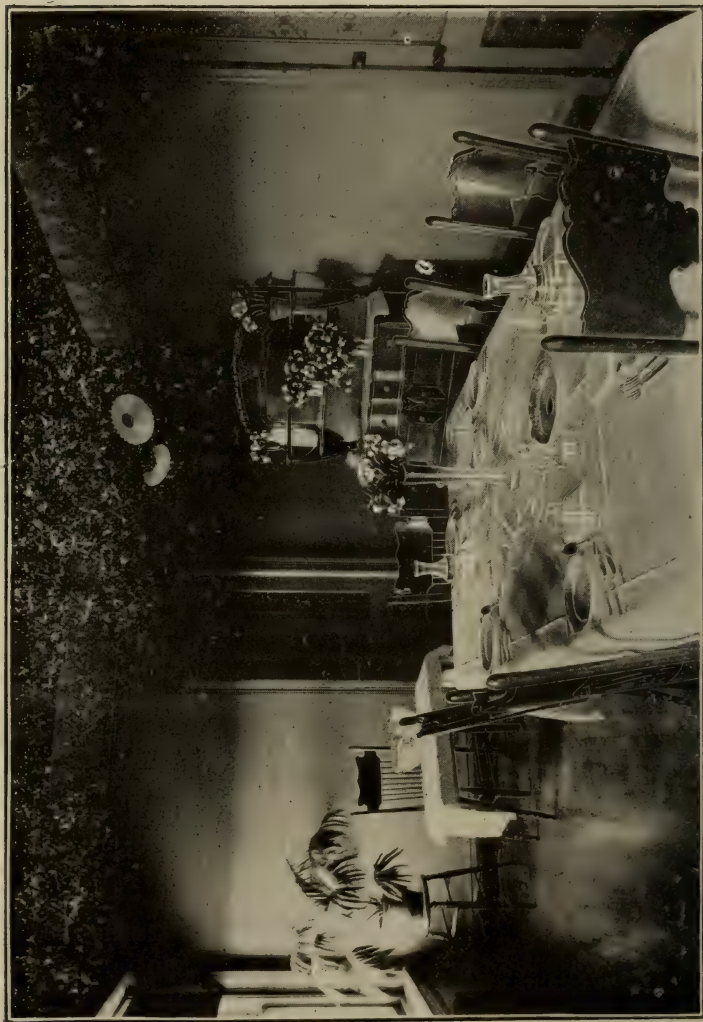
#### Department of English Language and Literature (Eh.)

PROFESSOR EYERLY; PROFESSOR POWERS.

In this department the aim is to make the study of language and literature practical in the fullest sense of these terms. Language is regarded as an instrument for the performance of a large part of the most important and the most delicate work of the world. Literature is studied largely with the view both of discovering such principles and processes of thought building as the student may embody in original composition, and of finding such truths as will guide him in his reading, heighten his appreciation of good literature, and quicken his conception of life.

Those students who choose English literature as their major subject will take courses 8, 9 and 10 in the Sophomore year, and courses 11, 12 and 13 in the Junior year. Of those students course 7 will not be required.

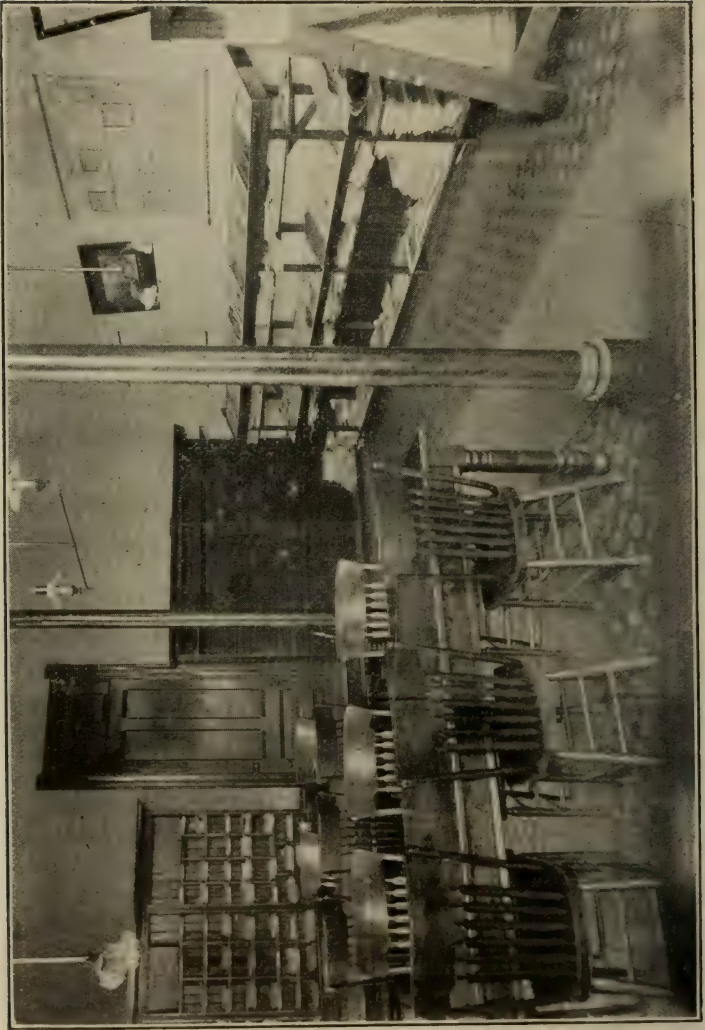
The following courses are given :



DOMESTIC SCIENCE DINING ROOM

- 1 F.—Rhetoric a 5,  $\left\{ \begin{array}{l} 8:30-9:30 \\ 10:30-11:30 \end{array} \right\}$  Professor Powers.  
a, Choice of words, variety in sentences, the paragraph, kinds of composition, figures of speech. The Elements of English Composition by Gardiner, Kittredge and Arnold is used as a text book, but necessary material is drawn from other sources. The practice in composition is based in part upon selections found in the text book, in part upon the experience of the student, in part upon outside reading. A few books are prescribed for outside reading, this reading counting for a definite portion of each term's grade. Prerequisites are the ability to spell and to write correctly simple sentences and a mastery of the fundamentals of English grammar. It is desirable that all should be familiar with Longfellow's *Evangeline* and *Courtship of Miles Standish*, Whittier's *Snow Bound*, Defoe's *Robinson Crusoe*, Mrs. Stowe's *Uncle Tom's Cabin*, Hawthorne's *Wonder-book* and *Tanglewood Tales*, Irving's *Sleepy Hollow* and *Rip Van Winkle*.
- 2 W.—Rhetoric, a 5,  $\left\{ \begin{array}{l} 8:30-9:30 \\ 10:30-11:30 \end{array} \right\}$  Professor Powers.  
a, Continuation of course 1.
- 3 S.—Rhetoric, a 3,  $\left\{ \begin{array}{l} 10:30-11:30 \\ 2:15 \quad 3:15 \end{array} \right\}$  Professor Powers.  
a, Continuation of course 2.
- 4 S.—American Literature, a 5, 8:30–9:30. Professor Eyerly.  
Pre 2.  
a, A general survey of American Literature and the study of a few of the most important works.  
Occasional essays on assigned topics.
- 5 W.—English Literature, a 5, 10:30–11:30. Professor Eyerly.  
Pre. 1, 2 and 3.  
a, An historical view of English literature and the study of some representative master pieces.  
Occasional essays on assigned topics.
- 6 S.—English Classics, a 5, 9:30–10:30. Professor Eyerly.  
Pre. 3.  
a, Macaulay's *Essays on Milton and Addison*; Shakespeare's *Macbeth*; Coleridge's *Ancient Mariner*; Scott's *Lady of the Lake*; Tennyson's *The Princess*.  
Bi-weekly essays.  
F.  
W.  $\left\{ \begin{array}{l} \\ \end{array} \right\}$  Theme Writing, 3:15–4:15. Professor Eyerly.  
a, Exercises in description, narration, exposition, and argumentation. In connection with argumentation, Webster's *Reply to Hayne*, and Burke's *Speech on Conciliation with the Colonies*, will be studied. This work continues throughout the year, three times a week in the Fall term, and once a week in the Winter and the Spring term.
- 8 F.—Greek and Latin Literature in English, a 5, 1:15–2:15. Professor Eyerly.





READING ROOM

Pre. 5 and 6.

The study of a few masterpieces.

- 9 W.—Chaucer, together with history of the English language, a 5, 8:30–9:30. Professor Eyerly.

Pre. 5 and 6.

- 10 S.—The Elizabethan Drama, a 5, 10:30–11:30. Professor Eyerly.  
Pre. 5 and 6.

- 11 F.—Advanced Rhetoric, a 5, 2:15–3:15. Professor Eyerly.

Pre. 5 and 6.

Genung's, *The Working Principles of Rhetoric* together with exercises in composition

- 12 W.—Structure and Style, a 5, 2:15–3:15. Professor Eyerly  
a, Brewster's *Studies in Structure and Style* and Genung's *Rhetorical Analysis* will be used in this work.

- 13 S.—Modern Essayists, a 5, 2:15–3:15. Professor Eyerly.

a, Lamb, DeQuincey, Macaulay, Carlyle, Emerson, Matthew Arnold and Ruskin.

- 14 F.—XVIII Century Literature, a 5, 9:30–10:30. Professor Eyerly.  
Pre. 8, 9, 10, 11, 12, 13.

- 15 W.—XIX Century Poetry, a 5, 9:30–10:30. Professor Eyerly.  
Pre. 14.

Tennyson and Browning are the principal authors studied.

- 16 S.—Modern Fiction, a 5, 1:15–2:15. Professor Eyerly.

Pre. 15.

Scott, Thackeray, George Eliot, Hawthorne.

### Department of Geology

(Gl.)

#### PRESIDENT SLAGLE

In offering the work of this department the object sought is to give to all candidates for degrees a thorough understanding of the foundation principles of the subject of geology and their intimate relations to the various activities of life.

- 1 F.—Geology, a 5, 10:30–11:30.

- 2 W.—Geology, a 5, 9:30–10:30.

Pre. for 1. All required work below Sophomore year.

Pre. for 2. Gl. 1 Zo. 2 and Bt. 3.

a, This is a two-term course and is intended to give the student an outline of the salient features of Geology as now developed. The first term will be devoted to a consideration of geologic processes and their results, the second term to the history of past ages. First term required, but second term not allowed in Mechanical and Electrical Engineering courses. Both terms required in Scientific Agriculture course, and may be elected in General Science course.

Text book. Chamberlin and Salisbury's Geology.

- 3 W.—Elements of Geology, a 5, 1:15-2:15

Pre. Zo 2.

a, The history of the evolution of the earth and its inhabitants.

LeContes' Compend of Geology, lectures, charts, diagrams, maps, notes.

---

### Department of History and Political Science

(H-P.)

PROFESSOR HARDING.

The work in History and Political Science is designed to give that information and training which are requisite to intelligent citizenship; to aid the student in acquiring a scientific method of investigation and consideration of historical data, and especially to awaken in him an interest in the great field of history and political science and an enthusiasm for personal, individual effort. Constant endeavor is made to teach the practical application of the social, political and economic experiences of the race to the problems of modern life. In the elementary courses 1 and 2 especial effort is made to aid the student in acquiring habits of careful and systematic use of the material with which he works. In the more advanced courses habits of research are encouraged so far as possible. Text books are used where they are found to be of real service, supplemented by lectures and class discussions based upon assigned readings or the original work of students. Students are encouraged in every way to make use of the college library, which is the tool house of this department.

The following courses are offered :

1. W.—General History, a 5, 8:30-9:30.

Pre. Eh. 3, Ms. 4.

a, History of Greece and Rome with brief preliminary survey of Oriental History.

Text book, reference work, papers, special study of a few carefully selected sources.

Myer's Ancient History.

- 2 S.—General History, a 5, 10:30-11:30.

Pre. 1.

a, Continuation of 1. Rapid survey of the mediæval period with emphasis upon the renaissance, the reformation and the rise and development of modern nations to 1789.

West's Modern History.

- 3 F.—English History, a 5, 8:30-9:30.  
Pre. 1.  
a, The political and constitutional history of England from 1485. Text book, collateral reading and study of important constitutional documents.  
Andrew's History of England.
- 4 W.—American History, a 5, 1:15-2:15.  
Pre. 1 and 2.  
a, Political and constitutional history of the United States from 1783 to 1829.  
Lectures, library work, careful study of important orations and public documents.
- 5 S.—American History, a 5, 2:15-3:15.  
Pre. 1 and 2.  
a, Continuation of course 4. The national democracy; development and downfall of slavery in the United States; financial, diplomatic and political problems of the civil war.
- 6 F.—Nineteenth Century History, a 5, 10:30-11:30  
Pre. 1 and 2.  
a, Study of the development of Europe in the nineteenth century and of the world politics of today The French Revolution, Restoration, the Revolutionary movements, the dual monarchies, unification of Germany and Italy, the third republic, the Eastern question, the exploration of Africa, and the problem of Asia.  
Lectures, text book and collateral reading.  
West's Modern History, Part III.
- 7 S.—American Political Institutions, a 5, 8:30-9:30.  
Pre 1 and 2.  
a, A study of actual government in the United States, federal, state and local, including party machinery and methods, the civil service and the nature and action of public opinion.  
Hart's Actual Government. Text-book, lectures and reports.
- 8 F.—Municipal Government, a 3, 1:15-2:15.  
Pre. 6  
a, The development, status and government of modern municipalities; municipal corruption; reform movements; American municipal progress; national importance of the municipal problem  
Assigned readings, papers and discussions. Reference to the works of Shaw, Goodnow, Farlie and Zueblin.
- 9 W.—International Law, a 5, 9:30-10:30.  
Pre. 1, 2 and 7.  
a, Sources of International Law examined. Rights and obligations of nations connected with peace, war, and neutrality.  
Lawrence's International Law.
- 10 W.—Political Economy, a 5, 10:30-11:30.  
Pre. 1, 2, 7 and 12.  
a, The laws of production, exchange, distribution and consumption of wealth. The relation of the state to the productive activity.



- Bullock's Economics, text-books, collateral readings, discussions.
- 11 S.—Money and Banking, a 3, 9:30–10:30.  
 a, The function of money and credit. Theory and history of banking.  
 Discussions, papers, collateral reading in Jevons, Walker, Dewey, Mill.  
 Dunbar's History and Theory of Banking.
- 12 F.—Sociology, a 3, 3:15–4:15  
 Pre. 9.  
 a, This course is designed to introduce the student into the rich field of social science. He is here required to familiarize himself with the principal forms of social organizations; the thoughts, sympathies, purposes and virtues that make society possible; with the benefits society confers and the conduct that worthy membership of it requires. Such study lies at the foundation of all further consideration of social problems.  
 Gidding's Elements of Sociology.  
 Lectures and discussions.

### Department of Horticulture and Forestry (Ho.)

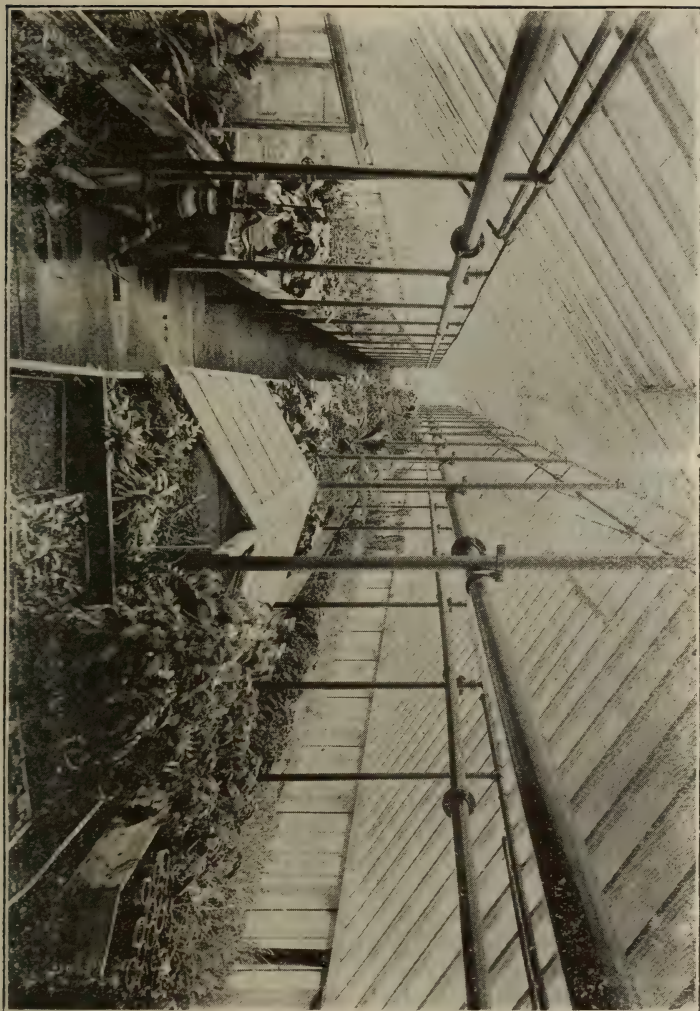
PROFESSOR HANSEN

In the regular college work these subjects are taught as an applied science as well as an art, full use being made of the student's attainments in the various sciences underlying the practice of Horticulture. The variation of cultivated plants, and the principles and methods of their development under the hand of man, are considered, as well as their propagation and cultivation.

Field and laboratory exercises emphasize the lessons taught in the class room. Ample facilities for practical illustration are offered by the eighty acres of experiment station horticultural grounds and college campus, including orchards, forestry plantations, arboretum, nursery, vegetable gardens, small fruit plantations, flower borders and ornamental grounds. The horticultural buildings contain class room, laboratory, conservatory and forcing house; grafting and potting rooms and storage cellars.

The commercial nursery course is intended as a short winter course for those desiring to engage in the business of growing plants and trees for sale, especially trees adapted to prairie conditions. Special stress is laid upon practical work

AN INTERIOR VIEW OF THE GREEN HOUSE



in the grafting room. No examination is required for entrance to this short course.

Students desiring to make Horticulture their major subject should take courses 1-5 inclusive. All general science students should at least elect course 3. Students in Domestic Economy should take course 8 and elect course 5; students in Art should elect courses 5 and 8. Those specializing in Forestry can elect Advanced Surveying and Forestry Literature instead of Pomology and Horticultural Investigation. Those specializing in Pomology may take Horticultural Investigation instead of Advanced Surveying; those desiring special preparation for Landscape Gardening should take Advanced Surveying, Horticultural Investigation and Floriculture in addition to courses 1-5.

The following work is offered:

- 1 F.—Horticulture, a 3, 8:30-9:30, b 2, 8:00-9:30  
 a, Propagation and management of fruit and ornamental plants, with special reference to prairie conditions; market and home gardening. The theory of garden operations; the relationship and physiology of plants from an Horticultural standpoint. A view is taken of the entire field of Horticulture and its various divisions as a life work.  
 b, Practical exercises in grafting room, nursery, orchard, garden and greenhouse  
 Lectures. American Horticultural Manual. Bailey's Principles of Vegetable Gardening
- 2 W.—Pomology, a 3, 8:30-9:30  
 Pre. 1  
 a, The history, management and propagation of fruits Exercises in technical descriptions of fruits  
 Lectures: text-book and references.
- 3 W.—Artificial Evolution, a 2, 9:30-10:30  
 a, The variation of plants under the hand of man. The modification and amelioration of plants by cultivation, soil, climate, selection and hybridization. Recent theories and work in plant breeding.  
 Lectures. Darwin's Animals and Plants under Domestication; Bailey's Plant-Breeding and Survival of the Unlike.
- 4 S.—Forestry, a 3, 2:15-3:15  
 a, Principles of forestry, the influence of forests on climate, timber planting on the prairies. European forestry methods as modified by prairie conditions, shelter belts, the propagation, cultivation, characteristics and uses of forest trees.  
 Lectures. Pinchot's Primer of Forestry, Green's Forestry in Minnesota.

- 5 S.—Landscape Gardening, a 2, 1:15-2:15.  
a, The Beautiful in nature, gardening as one of the fine arts, historic development of the ancient or geometric, and the modern or natural styles; best ornamental trees, shrubs, plants and hedges; lawn-making, walks and drives.  
Lectures, text book and references.
- 6 F. W. or S.—Horticultural Investigation, b 5.  
Pre. 1-4.  
b. Investigation along some special line.
- 7 F., W. or S.—Forestry Literature, a 5.  
Pre. 4.  
a, A course of advanced reading and investigation in Forestry.
- 8 W.—Floriculture, a 2, 8:30-9:30.  
a, The cultivation of flowers outdoors and under glass. House Plants. Exercises in the making of bouquets, wreaths and floral designs.  
Lectures and text-books.
- 9 W.—Home Gardening, a 3, 8:30-9:30.  
a, A course in home gardening for the students in the short winter course in Domestic Economy and Agriculture.  
Text-books, practical demonstrations and exercises.
- 10 W.—Nursery Handicraft, b 2, 1:15-3:15.  
b, Practical exercises in tree, shrub and plant propagation for students in the short commercial nursery course.

## SHORT COURSE IN HORTICULTURE.

(From Jan. 2 to March 20, 1907.)

Special Commercial Nursery Course. Lectures and practical work in commercial propagation and nursery management of fruit trees and small fruits, forest trees, ornamental trees, shrubs and plants, grafting, budding, pruning, cutting scions, packing grafts, making cuttings and stratifying seeds. All of every day.

Lectures: American Horticultural Manual, Bailey's Nursery Book, Goff's Principles of Plant Culture, Green's Amateur Fruit Growing and Forestry in Minnesota.

## Department of Modern Languages

(Ln.)

PROFESSOR WHEELER; MR. TRYGSTAD

Students who pursue work along scientific, technical or historical lines are virtually compelled to have at least a good reading knowledge of either French or German and in many cases of both.



Two years of language are required for the degree of Bachelor of Science in all courses except the Mechanical, Electrical and Civil Engineering and the Pharmacy, the student choosing French, German or Latin to satisfy this requirement. This work must be consecutive in whatever language the student elects, and whenever it is possible without interfering with his regular course the student is strongly advised to take a third year of the language chosen.

In such technical majors as engineering, French is advised, while in most of the natural or biological sciences, German will be found more preferable.

The following courses are offered :

- 1 F.—German, a 5, 9:30–10:30. Mr. Trygstad.  
Pre. Eh. 3  
a, Introductory course, elementary grammar, pronunciation, elementary exercises in translating from English into German and German into English. Reading in this course will be begun early. Lange's Method.
- 2 W.—German, a 5, 9:30–10:30. Mr. Trygstad  
Pre. 1.  
a, Grammar, reading, translation of easy sentences from English into German, translation at sight and by ear, dictation exercises and memorizing of selected passages of prose and poetry Exercises in conversation, translation of selected stories and easy poems  
Lange's Method.
- 3 S.—German, a 5, 9:30–10:30. Mr. Trygstad.  
Pre 2.  
a, Continuation of course 2 with special drill on irregular verbs and idiomatic expressions. A considerable amount of easy German prose will be read in this course and the more difficult passages accurately translated.  
Lange's Method.
- 4 F.—German, a 5, 1:15–2:15. Professor Wheeler  
Pre. 3.  
a, Grammar, derivation and composition of words, composition based on the works read. A large amount of reading on various topics selected from the works of nineteenth century writers will be done in this course. Translation at sight and by ear. Joynes-Meissner's Grammar will be used for reference.  
Stein's Composition.
- 5 W.—German, a 5, 1:15–2:15. Professor Wheeler.  
Pre. 4.  
a. This is a continuation of course 4. Grammar, advanced study of syntax, composition, reading of modern prose, dictation exercises.

Joynes Meissner's Grammar will be used for reference  
Stein's Composition

- 6 S.—German, a 5, 1:15-2:15 Professor Wheeler.  
Pre. 5.  
a. Course in scientific German designed to familiarize students with the more common terms used in the sciences. Extensive reading and translation Composition and dictation exercises on scientific subjects.  
Gore's Scientific German Reader will be used as the basis of the work.
- 7 F.—German, a 5, 8:30-9:30. Professor Wheeler.  
Pre. 6  
a. History of German Literature to the middle of the eighteenth century Study of the life and works of Lessing Themes upon different subjects brought up in the course.  
Minna von Barnhelm.  
Nathan der Weise
- 8 W.—German, a 5, 8:30-9:30. Professor Wheeler.  
Pre. 6.  
a. Life and works of Schiller. The literature and customs of the eighteenth century will be studied and discussed. Themes upon subjects connected with Schiller's life and works.  
Wilhelm Tell.  
Die Jungfrau von Orleans.  
Der Dreissigjoehrige Krieg.  
Gedichte.
- 9 S.—German, a 5, 8:30-9:30. Professor Wheeler.  
Pre. 6.  
a. Life and works of Goethe. Goethe's position in German literature and the relations between Goethe and Schiller will be considered. German literature up to 1832 Themes  
Faust. Part 1.  
Dichtung and Wahrheit.  
Gedichte.
- 10 F.—French, a 5, 9:30-10:30. Professor Wheeler.  
Pre. Eh. 3.  
a. Grammar and special drill in pronunciation. Translation of easy English sentences into French. Elementary reading and translation  
Fraser and Squair's Grammar.  
Guerber's Contes et Legends
- 11 W.—French, a 5, 9:30-10:30. Professor Wheeler  
Pre. 10.  
a. Pronunciation and grammar, translations into French, translations at sight and by hearing, dictation exercises, memorizing of selections of prose and poetry.  
Fraser and Squair's Grammar.  
Super's Reader.

- 12 S.—French, a 5, 9:30–10:30 Professor Wheeler.  
Pre. 11.  
a, Grammar continued. idioms and syntax, study of the subjunctive mode and irregular verbs, translation at sight and by ear, memorizing of prose and poetry, dictation and conversation exercises In this course a large amount of easy French will be read.  
Fraser and Squair's Grammar.
- 13 French, a 5, 2:15–3:15. Professor Wheeler.  
Pre. 12.  
a, Continuation of course 12. Grammar, composition based upon the works read, reading and translation of a large number of selections drawn from the works of the nineteenth century writers. Dictations.  
Fraser and Squair's Grammar
- 14 W.—French, a 5, 2:15–3:15. Professor Wheeler.  
Pre. 13.  
a, Continuation of course 13. Grammar, composition and themes. Particular attention will be paid to the reading of the works of modern authors. Dictation exercises.  
Fraser and Squair's Grammar
- 15 S.—French, a 5, 2:15–3:15. Professor Wheeler.  
Pre 14.  
a, In this course a large amount of scientific French will be read, and selected passages carefully translated. Translation by ear and at sight, dictation exercises on scientific subjects.  
Simple Lectures, sur les Sciences, les Arts et l'Industrie.  
Garrigues et Monvel.  
Fraser and Squair's Grammar
- 16 F.—French, a 5, 10:30–11:30. Professor Wheeler.  
Pre. 15.  
a, Victor Hugo and his times. Special study of the works of Victor Hugo, with a consideration of the works of other great writers of the nineteenth century. Themes  
Hugo—Quatre Vingt Treize. Les Miserables.  
Dumas—Les Trois Mousquetaires.  
Balzac—Eugenie Grandet.
- 17 W.— French, a 5, 10:30–11:30. Professor Wheeler.  
Pre 15.  
a, Corneille and Racine. Their lives and works. Study of the literature and society of the seventeenth century. Themes.  
Corneille—Le Cid. Horace.  
Racine—Athalie. Les Plaideurs.
- 18 S.—French, a 5, 10:30–11:30. Professor Wheeler.  
Pre. 15.  
a, Studies of Moliere's comedies and the fables of La Fontaine. Continuation of the study of the literature and society of the

seventeenth century. Themes.

Moliere L'Avare. Le Bourgeois Gentilhomme. Le Misanthrope.

La Fontaine. Fables Choiesies

### Department of Mathematics and Astronomy

(Ms.)

PROFESSOR BROWN; MR. NELSON

The general work of this department is planned with the view of cultivating in the student habits of systematic and accurate thinking as well as of giving a knowledge of methods in dealing with the practical problems that may arise in college work and in future life. Independent effort is encouraged to the greatest possible extent, the solution of problems and original demonstrations forming an important part of each course. In mathematics, courses 1, 2, 3, 4, 5, 6 and 7 mentioned below are required of all students.

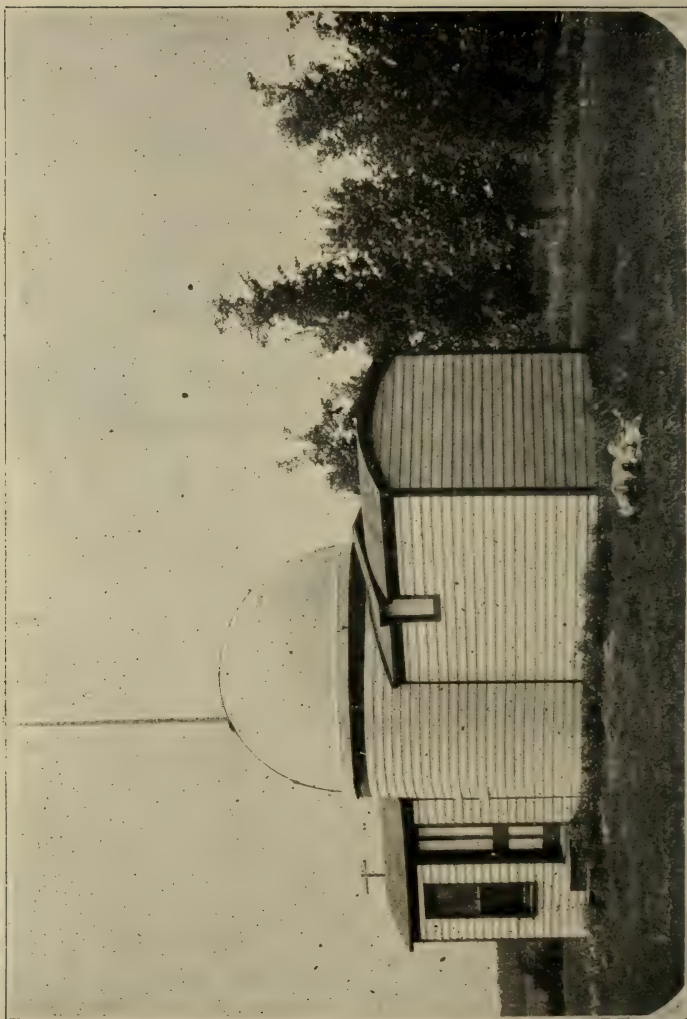
In addition to these, other courses are offered for election, including the prerequisites required in the other departments together with subjects designed primarily for students who may wish to pursue special work in mathematics.

In Astronomy one course is required for graduation. This is intended to give such knowledge of the science as an educated person should possess. A course in practical Astronomy is also offered for election. The class room work of both these courses is supplemented by the use of instruments in the observatory. These include a five-inch equatorial telescope, a transit instrument, a sidereal clock and a chronograph.

The following courses are offered:

- |   |  |               |
|---|--|---------------|
| 1 | F. } Algebra, a 5, { 8:30-9:30   | } Mr. Nelson. |
|   | W { 8:30-9:30 and 10:30-11:30  |               |
|   | a. The fundamental operations, involution, evolution, factors and multiples. |               |
|   | Milne's Academic Algebra.  |               |
| 2 | W { Algebra, a 5, { 10:30-11:30  | } Mr. Nelson. |
|   | S { 9:30-10:30 and 10:30-11:30   |               |
|   | Pre 1.   |               |
|   | a, Fractions, simple equations of the first degree, indices, complex numbers |               |
|   | Milne's Academic Algebra.  |               |
| 3 | F. } Algebra, a 5, { 9:30-10:30 and 1:15-2:15                                | } Mr. Nelson. |
|   | S { 1:15-2:15  |               |
|   | Pre 2.   |               |





ASTRONOMICAL OBSERVATORY

a, Quadratic equations, inequalities, logarithms ratio, variations, proportion

Milne's Academic Algebra.

- 4 F. { Geometry, a 5, { 10:30 11:30 } Mr. Nelson.  
W { 9:30-10:30 }

a, Especial emphasis is laid on original solutions.

Sander's Plane Geometry.

- 5 W { Geometry, a 5, { 1:15-2:15 } Mr Nelson.  
S. { 9:30-10:30 }

Pre. 4.

a, Completion of Plane Geometry

- 6 F. { Solid Geometry, a 3 { 9:30-10:30 } Profes or Brown.  
S. { 2:15-3:15 }

a, All the important principles of Solid Geometry will be covered.

- 7 W.—Trigonometry, a 5, 9:30-10:30. Professor Brown.

Pre. 3 and 5.

a, The trigonometric functions, analytically and graphically; the use of logarithms, the solution of right and oblique triangles.

- 8 S.—Algebra, a 5, 8:30-9:30 Professor Brown

Pre. 3

a, A review of the quadratic equation, the progressions, imaginary quantities, inequalities, permutations and combinations, the binomial theorem, logarithms

- 9 W.—Analytic Geometry, a 5, 8:30-9:30 Professor Brown.

Pre. 7 and 8

a, The point, right line, the conics, the general equation of the second degree.

- 10 S.—Differential Calculus, a 5, 10:30-11:30. Professor Brown

Pre 9.

a, The differential coefficient, the formulas of differentiation, the expansion of functions, successive and partial differentiation, indeterminate forms, tangents and normals, radius of curvature, evolutes and involutes, envelopes, maxima and minima

- 11 F.—Integral Calculus, a 5, 8:30-9:30. Professor Brown.

Pre. 10

a, Integration as the inverse operation of differentiation, integration of rational fractions, integration by rationalization, by substitution, reduction formulas, integration as a summation, rectification of curves, areas and volumes with numerous problems.

- 12 W.—Analytic Mechanics, a 5, 1:15-2:15. Professor Brown.

Pre 11

a, The application of analytic geometry and differential and integral calculus to the problems of mechanics. The laws of equilibrium, motion, work and energy of particles and rigid bodies.

- 13 S.—Analytic Mechanics, a 5, 1:15-2:15. Professor Brown.

Pre. 12.

a, Continuation of course 13

Lectures and references.

- 14 F.—Advanced Analytic Geometry, a 5, 1:15-2:15 Professor Brown.  
Pre 10.  
a, The general equation of the second degree, the analytic geometry of space, the point, plane, straight line, surfaces of the second order.
- 15 W.—Theory of Equations and Determinants, a 5, 3:15-4:15. Professor Brown.  
Pre.
- 16 W.—Differential Equations, a 5, 2:15-3:15. Professor Brown.  
Pre 12.  
Johnson's Differential Equations
- 17 F.—Astronomy, a 5, 10:30-11:30. Professor Brown.  
Pre. 7.  
a, Astronomical instruments, astronomical co-ordinates, the earth, moon and sun; the planets, fixed stars and constellations; observations and measurements with the equatorial and the transit instruments  
Young's Manual.
- 18 S.—Practical Astronomy, a 3, 2:15-3:15. Professor Brown.  
Pre. 7 and 13.  
a, Astronomical problems; use of ephemeris.

---

Department of Mechanical Engineering  
(Me.)

PROFESSOR SOLBERG; MR. TROOIJEN; MR. WESTCOTT

The object of the work offered is to give the students a thorough training in the theoretical principles underlying the science of mechanics and machines and at the same time to enable them to become practically familiar with some of the numerous applications of these principles which are of such inestimable value to the human race.

The instruction is both theoretical and practical. The usual method of text-book study and lectures are employed, but the student is required to put into practice, as far as possible, the instruction which he receives. Hence the work of the class-room is supplemented and practically exemplified by practice in shops. The student not only studies the theories of constructing and operating machinery, but in the drawing room he designs, and in the shops constructs and operates such machines. It is believed that those who complete this course will be able to fill responsible positions in manufacturing establishments. It is important that French be elected as the language that is required in addition to English.

The department is located in the Engineering building. The workshops are supplied with a large variety and quantity of tools. The woodshop is furnished with twenty-five sets of carpenter tools and with eight wood turning and one pattern maker's lathe, a scroll saw, a combination circular saw and a 20 inch planer. There is also a variety of special tools for wood working.

The machine shop is furnished with a large number of engine lathes of different sizes, a universal milling machine, shaper, planer, tool grinder, drill press, emery wheels and a great variety of hand tools. The machinery is driven by a 25-H. P. Atlas Engine.

The Experimental Laboratory is equipped with a 100,000 pound Riehle Vertical screw testing machine, a 2000 pound cement testing machine, together with steam, gas and hot-air engines. These machines are all furnished with a large variety of smaller instruments for making complete tests, such as indicators, planimeters, tachometers, extensometers, compressometers, deflectometers, etc., also all the necessary equipment for testing cements and concretes.

Two courses in Architectural Drawing and Designing are offered. Additional work along this line will be given to students who desire it.

A large number of pictures, drawings, and illustrative material has been recently added to the equipment through the liberality of manufacturers, and friends of the college.

The following work is offered :

- 1     $\left. \begin{array}{l} \text{F.} \\ \text{W} \\ \text{S} \end{array} \right\} \text{Carpentry, b 3, 1:15-3:15. Mr. Westcott.}$   
       b, Talks on the care and use of different tools. Practice at the bench in making the various joints used in wood construction.
- 2     $\left. \begin{array}{l} \text{F.} \\ \text{W} \\ \text{S.} \end{array} \right\} \text{Wood Turning, b 3, 1:15-3:15. Mr. Westcott.}$   
       b, Wood turning in hard and soft woods.
- 3     $\left. \begin{array}{l} \text{F.} \\ \text{W} \\ \text{S.} \end{array} \right\} \text{Forging, b 3, 1:15-3:15. Mr. Trooien.}$   
       b, Bending, drawing, up-setting, welding and forging iron.
- 3c    $\left. \begin{array}{l} \text{F} \\ \text{W} \\ \text{S} \end{array} \right\} \text{Forging (steel), b 2, 1:15-3:15. Mr. Trooien.}$





WOOD WORKING SHOP

b, Steel manipulation, including cold chisels, punches and lathe and planer tools, tempering and hardening.

- 4 F. }  
W } Machine Shop, b 2, 1:15-3:15. Mr. Trooien.  
S. }

b, Manipulation of the various machines in turning, planing, shaping, milling, gear cutting and tool making.

- 4c F. }  
W } Machine Shop, b 3, 1:15-3:15. Mr. Trooien.  
S. }

b. Construction of some machine or appliance from designs made in drawing room.

- 5 F. }  
W } Mechanical Drawing, 1:15-3:15. Professor Solberg.  
S. }

b. Instrumental drawing, geometrical problems and parts of machines.

This work is offered during the entire year, and at hours convenient to teachers and students.

- 5c F.—Architectural Drawing, b 5, 1:15-3:15, Professor Solberg.  
Pre. Me. 5.

b, Rendered drawings of simple buildings, examples of various orders, giving facility in draughtmanship, familiarizing students with principles.

- 6 F. }  
W } Machine Design, { b 5 } 1:15-3:15. Professor Solberg.  
          { b 3 }

b, Solution of various problems involving the design of simpler parts of the machine.

Klein's Machine Designs.

- 6c W.—Architectural Design, b 5, 1:15-3:15. Professor Solberg.  
Pre 1 and 2.

b, Principles of planning introduced in practical problems. exercises in composition and details.

- 7 F.—Kinematics, b 5, 1:15-3:15. Professor Solberg.

b, Geometry of machinery, problems in the design of motion transmitting appliances

- 8 W —Engineering Design, b 5, 1:15-3:15. Professor Solberg.

b, Solution in the drawing room of some practical problems in design and making working drawings of same.

- 8c S.—Engineering Design, b 5, 1:15-3:15. Professor Solberg.  
Continuation of course 8.

- 9 F.—Elements of Mechanism, a 5, 9:30-10:30. Professor Solberg.

a, Elements of machinery, velocity ratios, graphic representation of speed and acceleration. Motion transmitting parts, such as gears, belts, cams, screws, link work Automatic feeds, parallel and quick return motions. Designing.

Wood and Stahl.

- 10 S.—Steam Engine, a 5, 8:30-9:30. Professor Solberg.

a, Study of the modern steam engine, slide valve, and when in



THE BLACKSMITH SHOP

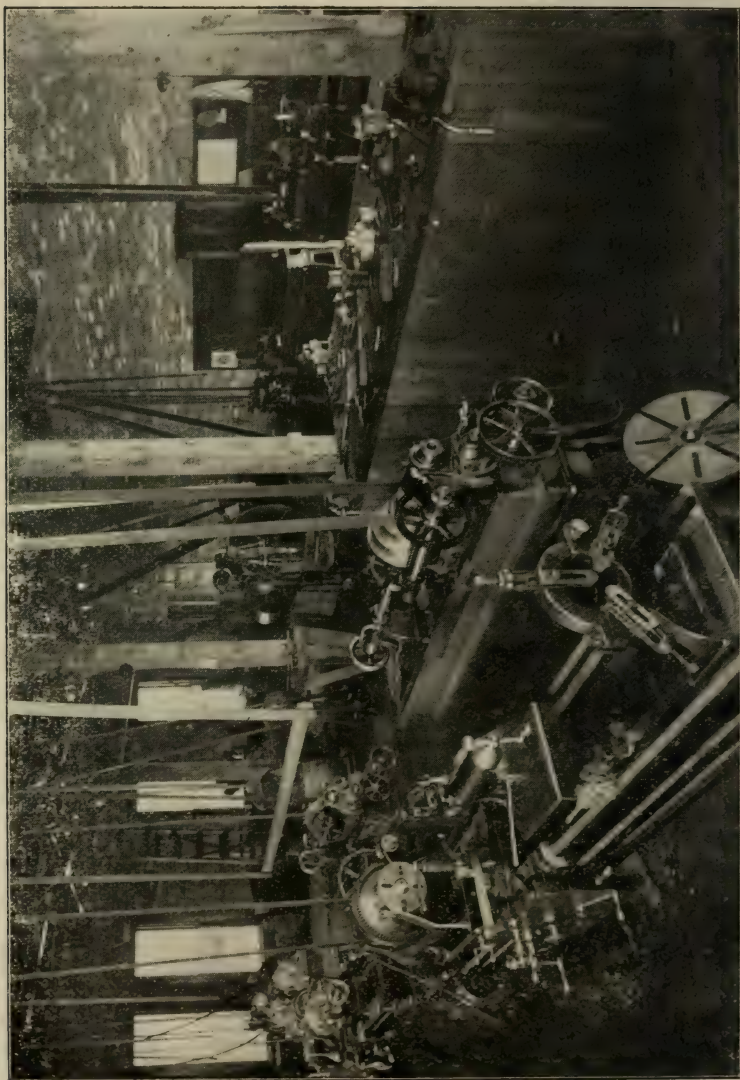
combination with independent cut-off valves, link motion and Zeuner diagrams, reciprocating parts and indicator practice.  
Ripper's Steam Engine.

- 11 F.—Steam Boilers, a 5, 8:30-9:30 Professor Solberg.  
a, Advantages and disadvantages of using the various forms of boilers, methods in construction, tubes and flues, plates, riveting, bracing, grate and heating surface, guages and feed appliances, setting, care and operation.  
Peabody's Steam Boilers
- 12 W —Strains in Framed Structures, a 5, 8:30-9:30. Professor Solberg  
a, Graphical determination of stresses under action of static, moving and wind forces.  
Green, Vol. 1.
- 13 S —Algebra, a 5, 8:30-9:30. Mr. Trooien.  
a, A special course for students in Steam Engineering.
- 14 S —Strength of Materials, a 5, 9:30-10:30. Mr. Trooien  
a, Study of the strength and elastic properties of materials of construction, and elementary stresses of deformation in tension, compression, shearing, torsion and flexure and mechanics of beams, columns and shafts.  
Merriman's Mechanics of Materials.
- 15 F. or S.—Descriptive Geometry, b 5, 1:15-3:15. Professor Solberg.  
b, Instruction in methods of representing by drawing all geometrical magnitudes and solution of problems relating to these magnitudes in space.
- 16 F. or S —Perspective. 1:15-3:15 Professor Solberg  
A full course in perspective is offered to those students who desire to especially fit themselves for work in architecture.
- 17 F —Gas and Oil Engines, a 3, 9:30-10:30. Mr. Trooien.  
a, Study of the theory, design and operation of the different types and cycles of gas and oil engines.  
Hutton's Gas Engines
- 18 W —Experimental Engineering, b 4, 3:15-5:15. Mr. Trooien.  
a, Here each student is required to carry out a definite series of tests of the various materials of construction, such as timber, cast iron, wrought iron, steel, cements and concretes. He is also required to make complete tests of efficiencies of gas engines, hot air engines, steam engines and boilers etc.
- 19 S.—Experimental Engineering, b 3, 3:15-5:15. Mr. Trooien.  
b, An advanced course in experimental Engineering will be given to those who desire to pursue further investigation along those lines.

#### SHORT COURSE IN PRACTICAL STEAM ENGINEERING

Modern agricultural methods have introduced in such a marked degree, the steam engine as a substitute for animal power that the consequent growing demand for steam engi-





IRON SHOP

neers has led the college to arrange a two term course of study for the special training of steam (especially traction) engineers. Extreme care has been taken only to offer such work as shall prove valuable to the man running the traction engine or other machinery. A relatively large amount of shop work, engine repairing and engine running is introduced, with a proper proportion of recitations in closely allied subjects. Upon the satisfactory completion of this work the student is given a certificate which is virtually the same as a license in this state to run an engine.

Students who complete the work of the fall term of the preparatory department will be admitted as candidates for certificates without entrance examinations. Others are expected to pass satisfactory examinations in arithmetic as far as the preparatory class carries that subject in the fall term. Also to read intelligently and show such general elementary training as shall indicate that they are able to understand the subjects embraced in the engineering course.

(Winter Term, January 3 to March 21.)

Arithmetic, a 5.....	8:30-9:30.
Physics of Steam, a 5.....	9:30-10:30
Civil Government, a 5.....	10:30-11:30
Forging, b 3.....	1:15-3:15
Mech. Drawing, b 2.....	1:15-3:15

(Spring Term, March 26 to June 14.)

Algebra, a 5.....	8:30-9:30
Steam Engine Lectures, a 5.....	9:30-10:30
Elementary Physics, a 5.....	10:30-11:30
Forging, b 2.....	1:15-3:15
Mech. Drawing, b 3.....	1:15-3:15
Engine Practice, b 5.....	3:15-5:15

#### Department of Military Science (Mt.)

CAPTAIN GUYER

This course is valuable for many reasons:

- 1 It gives young men an upright carriage and a confident manner that will be of material benefit to them in after life.
- 2 It gives them the habit of instinctive obedience to constituted authority, than which there is no quality more important.



TESTING LABORATORY



3 Every young man, however much he may be opposed to war on principle, is in duty bound to serve his country when war comes. This course enables him to render such service more valuable.

The wisdom of the federal law requiring military instruction in land grant colleges was forcibly illustrated in the war with Spain. Students and graduates of these colleges were potent factors in putting the volunteer army into proper condition for actual service.

The general government, desiring to encourage military study at colleges, generously furnishes a regular army officer



COMMANDANT AND OFFICERS OF CADET BATTALION

as professor of military science and tactics, and in addition offers the following inducements to students:

1 Members of the battalion holding the highest standings for general excellence in the entire course as hereinafter outlined will, upon graduation, be reported to the adjutant general of the United States Army, who will publish their names in the army register. From this list officers are se-



lected by appointment of the president of the United States for volunteer service in case of war.

2 Graduates who have satisfactorily completed the prescribed military course may take an examination and on satisfactory evidence of ability their names will be placed upon a roll from which officers will be selected in time of war.

3 Graduates who have satisfactorily completed the prescribed military course may, on the recommendation of the governor of the state, attend any of the United States army service schools. The general government will pay transportation both ways, furnish quarters, and allow one dollar (\$1) per day for subsistence during attendance.

Course of instruction adopted in accordance with regulations of the war department.

All cadets are divided into three classes as follows:

1st Class—Juniors and Seniors.

2nd Class—Freshmen and Sophomores, with such other students as are about of equal academic rank.

3rd Class—Preparatory and Sub-Freshmen Cadets and others of about equal academic rank.

The second and third classes will be required to take the full military course. The first class will be required to take the course of lectures and will be examined on the subjects covered. Cadets of this class may elect to take the full course, and all may be required to turn out for unusual or great events when directed by the commandant and approved by the president.

Cadet Officers, Sergeants, and N. C. S. will be selected from the first and second classes.

Cadet Corporals from the third class.

#### FALL TERM—PRACTICAL—ALL

Drills—Squad, company and battalion—close and extended order.

Guard, advance and rear guard and outposts, marches.

Ceremonies—Guard mount, inspection, review, parade.

First Class—Field engineering, elements

Second Class—Military Topography.

Third Class—Signaling, flag.

#### WINTER TERM—PRACTICAL—ALL

Outside—Company and Battalion drills, guard, reconnoissance, when weather permits.

Inside—Company, squad drill, bayonet exercise.

Military gymnastics.

First aid to the injured.

WINTER TERM—(Continued)—THEORETICAL.

First Class—Records and Papers, Field Engineering, Army Regulations, Lectures.

Second Class—Firing Regulations, Military Topography, Lectures.

Third Class—Drill Regulations, Guard Manual.

SPRING TERM—PRACTICAL,—ALL

Company and battalion drills, guard duty, practice marches, target practice.

Ceremonies—Guard mount, inspection, review, parade, escort of colors.

Camp—Advance and rear guard, outpost, camp sanitation, cooking. Solution of problems in minor tactics.

First Class—Field Engineering (Continued.)

Second Class—Military Topography (Continued.)

Third Class—Signal, Heliograph and telegraph.

---

Department of Music and Physical Culture  
(Mu.)

MR. MANN; MISS WESTON; MRS. PETERS.

This department at present occupies the basement of the North Building.

Any student taking special work in music must pursue whatever courses in other departments the faculty may think best unless a request from parents or guardian is received asking that the student be excused from this additional work. No major can be taken in this department; however, work above the second grade (see below) in both vocal and instrumental music can be selected as counting towards a degree, according to the general rules.

A special fee of TEN DOLLARS per term will be charged all those who take music, either vocal or instrumental. This will cover both tuition and rental of instrument.

Two lessons of thirty minutes each are given per week as the required amount of instruction needed. Pupils are expected to practice two hours each day.

Instruction and practice hours are arranged by the professor, and absence from either treated the same as from any other college exercise.

Music pupils are expected to take part regularly in the public recitals arranged, as in no other way can they secure

that self control and confidence so necessary and valuable in a musical education.

For the convenience of those who wish to make a specialty of music, the instruction offered is here set forth in grades. The studies thus arranged are intended to give a broad and thorough musical education based not only on the classic masters, but embracing the best works of modern composers.

### PIANO MUSIC

Practice in note writing, ear training, etc., is begun in the first grade. Theory of Music is taken up with Grade III, followed by Harmony and Musical History with Grades IV and V. This work is taken in class.

Those who complete successfully the first four grades in piano music, theory of music, one year of harmony, and give a public recital, will be given a certificate in music.

Students who complete all of the grades in piano work, two years of harmony, history of music, and give a public recital, will be given a diploma in music.

#### GRADE I

Position of hands, National Course of Music.  
Duvernoy, Czerny, Touch and Technic.  
Schumann's Studies for the Young

#### GRADE II

Mathew's Graded Studies, Czerny, Schmidt.  
Loeschhorn, Heller, Bertini, Touch and Technic.

#### GRADE III

Clementi, Kulau, Heller, Bach, Czerny, Haydn.  
Chopin's Valses, Zwintscher.

#### GRADE IV

Bach, Clementi, Cramer, Chopin, Mozart, Mendelssohn.  
Kullak, Zwintscher, Tappert's School for Left Hand.

#### GRADE V

Bach, Moscheles, Beethoven, compositions of Schubert.  
Chopin, Handel, Schumann, Rubinstein, Greig, Liszt.  
Weber.

### VOICE CULTURE

Pupils who complete the three grades below, together with the theory of music and one year of harmony and give a public recital, will receive a certificate in music. To obtain a diploma two years of harmony and one year of history of music will be required.

The work is as follows:

## GRADE I

Placing the voice, correct breathing, exercises for tone production and attack, technical and other studies to suit the voice, Sieber, Op. 94, eight-measure vocalises, Marchesi, twenty elementary vocalises, etc

## GRADE II

Concone, Marchesi, Sieber, exercises in interpretation and expression, tone placement, songs.

## GRADE III

Sieber, Concone, Panofka, study of larger forms of execution songs from Schumann, Schubert, Rubinstein, ballads and sacred songs.

## VIOLIN MUSIC

In this work the following is offered :

## GRADE I

Position, scale studies, exercises in bowing, Brayley's easy scale and finger exercises, Wohlfart Op. 38, Easiest Beginning, David's Violin School Part I, DeBeriot's School Part I, easy duets and solos

## GRADE II

Hoffman, School Part II, Kayser, Etudes Op. 20, Hermann's School Part II, Dancla's Petetes Airs Varie, Pleyel's duets, Mazas, Op 36, Part I, Etudes, Speciales, solos

## GRADE III

David's School Part II, Schradieck Technic of Violin Playing, De Beriot's School Part II, Kayser Etudes Book III, Etudes by DeBeriot, Dancla, Mazas and others. Solos by Raff, Hermann, David, DeBeriot, Dancla, Bohm, Schubert, Wieniaski, etc.

## VOCAL MUSIC

## CHORAL UNION

In connection with this department a Choral Union is maintained, and meets one evening each week throughout the year. The object of this organization is the study of choruses, glees, oratorios, etc. This work is invaluable to students who are interested in vocal music, and especially so to those who cannot take a regular musical course.

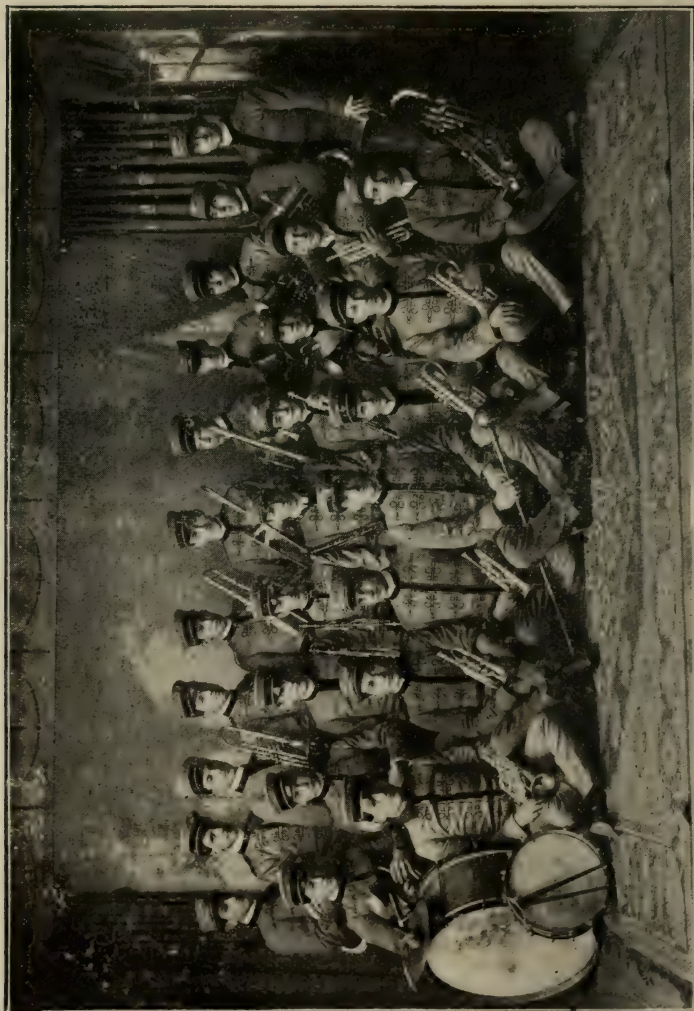
When there are a sufficient number who desire it arrangements will be made also for a beginning class in sight singing.

## EUTERPE SOCIETY

This society is an organization for the students of the department of music. Meetings are held on the second Tuesday evening of each month at the homes of various members.

At each meeting a musical program is given, followed by a short social time. The object of the society is to give students an opportunity of performing before the public and to encourage an interest in the best music.





THE COLLEGE BAND

### PHYSICAL CULTURE

Regular physical exercises are required of all, and most excellent provision is now made for both sexes to secure systematic development of the body and graceful carriage through indoor and field exercises.

This work is under careful and efficient supervision. A medical director has charge of the gymnasium exercises, and an experienced athletic trainer of all field sports.

Both sexes have well equipped gymnasiums. Girls are required to take regular class work in free movements with the dumb-bells and clubs and such other exercises as belong to indoor gymnastics according to requirements fully set forth in General Information.

### ELOCUTION

The first year's course in elocution covers all the essentials of a technical education for teacher or public reader.

#### TOPICS

Culture of the Speaking, Voice.

Quality of Tone, Force.

Articulation, Pitch.

Physical Culture, Time.

Breathing, Volume.

Elements of Gesture, Melody, Analysis.

Readings and Recitations.

The second year's course is the perfecting of the first year's work by advanced practice, leading away from the general to the individual study.

Care is taken to unfold the student's powers of observation and imagination, and preserve his individuality. Therefore, private instruction occupies an important place in the course. Hours for private instruction will be arranged to suit the convenience of the pupil.

#### CLASSES IN CRITICISM.

In these classes students who receive private instruction are required to recite monthly. Criticism from students and teacher follows each recitation.

Elocution students are expected to take part regularly in the public recitals.

---

Department of Latin and Pedagogy

(Pd.)

PROFESSOR MCLENON.

The aim in the courses offered in Latin is to give a sufficient knowledge of Latin to enable the student to pur-

sue the work in science and in modern languages with success. It is also a valuable aid to the proper understanding of the English language.

The object of the work in pedagogy is to offer a course of instruction which will fit the graduates of the college to enter upon the work of teaching.

There is a great demand for trained teachers in our state, especially for those who have had training in the sciences. This demand the college will endeavor to meet by offering a course in Pedagogy, which will include the study of Psychology, History of Education and Methods of Teaching.

There is a demand for teachers who are prepared to teach Agriculture in our schools. This demand the college will also try to meet.

The following work is offered :

#### LATIN

F.—a 5, 9:30-10:30.

Pre Eh. 3.

a, Primary principles of the language, including inflection and easy syntax, with constant drill in the vocabulary necessary for reading Cæsar.

Bellum Helveticum

2 W.—a 5, 9:30-10:30

Pre. 1.

a, Continuation of 1, with more attention to etymology and syntax by means of daily translations from English into Latin.

Bellum Helveticum.

3 S.—a 5, 9:30-10:30

Pre. 2

a, Completion of Bellum Helveticum with continuation of syntax and composition.

4 F.—Cæsar, a 5, 1:15-2:15.

Pre. 3.

a, Books II and III with study of Latin Grammar.

5 W.—Cæsar, Book IV, a 5, 1:15-2:15.

Pre. 4.

a, Cicero, Orations against Cataline I and II.

6 S.—Cicero, a 5, 1:15-2:15.

Pre. 5.

a, Orations against Cataline III and IV followed by the Poet Archias.

Lectures on Roman Life throughout the course

NOTE—A third year of Latin is offered to those who wish to pursue the study further, in which the first six books of Virgil's Aeneid will

be studied with special attention to scansion, rhetorical figures, and mythological references. Hours to be arranged by teacher and students.

## PEDAGOGY.

- 7 S.—Psychology, a 4, 3:15–4:15  
Pre. H-P. 1 and Eh. 5.  
a, Study of nervous mechanism at disposal of the mind. Discussion of the various phases of mental activity. Special attention given to the cultivation of mental faculties and will power, and their relation to the study of Pedagogy.  
Halleck's Psychology and Psychic Culture.
- 8 F.—History of Education, a 5, 2:15–3:15  
Pre. 7.  
a, 1. The Oriental Nations  
2. The Ancient Classical Nations.  
3. Christian Education Before the Reformation.  
4. Education from the Reformation to the Present time.  
Text, Painter's History of Education.
- 9 W.—Methods of Teaching, a 5, 2:15–3:15.  
Pre. 8.  
a, Special attention to child study, school organization and school management  
Lectures and discussion.  
White's text books will be used as a basis of the work given.
- 10 S.—Ethics and Applied Psychology, a 5, 10:30–11:30.  
Pre. 7, H-P. 12.  
a, The course in Ethics includes a study of Ethical principles grounds of governmental authority, discussions on conduct of individuals and nations.  
Hickok's Moral Science.  
Course in applied Psychology is given.  
Lectures and selected readings.

---

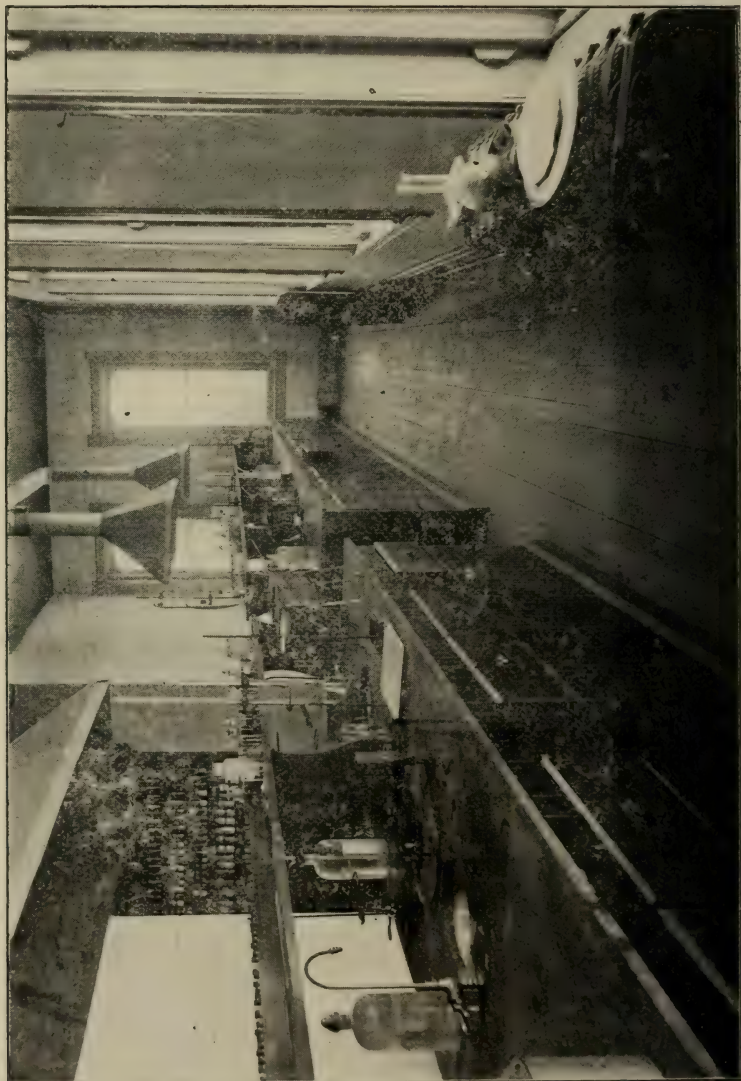
Department of Pharmacy  
(Py.)

## PROFESSOR WHITEHEAD.

This work is intended, primarily, to thoroughly teach young men and women the science of pharmacy. The courses of the Sub-Freshman year are required as prerequisites for entrance.

The student may, on the completion of the courses of the Freshman and Sophomore years of the Pharmacy course given on page 57, receive the degree of Pharmacy Graduate (Ph.G.) This is the only work of the kind offered in the state and receives the hearty commendation of the State





PHARMACY LABORATORY

Board of Pharmacy. This line of work offers many inducements to young men, the requests of the druggists of the state for graduates of the department being far in excess of the supply.

For the student intending to take up the study of medicine or dentistry, or who wishes to prepare himself to teach the sciences in the high schools of the state, a continuation of the work of this group to the completion of the Junior and Senior years is recommended. On the completion of the group the student may receive the degree of Bachelor of Science.

1 F.—Scientific Latin, a 5, 9:30–10:30

a, Subject is taught with special reference to its application in pharmacy. The vocabulary employed is strictly pharmaceutical. Robinson's Grammar of Pharmacy and Medicine, first 80 pages.

2 F.—Pharmacy, a 5, 10:30–11:30.

Pre. Ch. 3.

a, Forms and uses of pharmaceutical apparatus, weighing by apothecary and metric systems, specific gravity of solids and liquids, heating apparatus, determination of boiling and melting points, distillation, comminution, solution, precipitation, filtration, crystallization, percolation and pharmaceutical problems.

Remington's Practice of Pharmacy.

Oldberg's Pharmaceutical Problems.

3 W.—Pharmacy, a 5, 9:30–10:30.

Pre. 2 and Ch. 4.

a, Study of official medicines, waters, syrups, mucilages, mixtures, spirits, elixirs, liniments, infusions, tinctures, fluid extracts, oleo-resins, extracts and official inorganic salts and compounds.

Remington's Practice of Pharmacy.

4 W.—Pharmacy, b 5, 10:30–12:00.

Pre. 2 and Ch. 4.

b, Preparation of waters, syrups, mucilages, etc., mentioned in course 3, and must be taken in connection with it.

Remington's Practice of Pharmacy.

5 S.—Pharmacy, a 5, 9:30–10:30.

Pre 3 and 4.

a, Solutions, emulsions, powders, pills, ointments, plasters; reading prescriptions.

Remington's Practice of Pharmacy.

6 S.—Pharmacy, b 5, 10:30–12:00.

Pre. 3 and 4.

b, Compounding of prescriptions, making of solutions, emulsions, powders, pills; reading and compounding prescriptions. Must be taken same term as course 5.

Remington's Practice of Pharmacy.

Ruddiman's Incompatibilities in Prescriptions.

- 7 F.—Materia Medica, a 5, 8:30–9:30.  
a, Medicinal properties, doses and poisonous effects of the various medicines, together with the antidotes which the pharmacist may be required to administer in an emergency, will receive full and careful treatment.
- 8 W.—Materia Medica, a 5, 8:30–9:30.  
Pre 7.  
a, Continuation of course 7.
- 9 S.—Materia Medica, a 5, 8:30–9:30.  
Pre 8.  
a, Continuation of courses 7 and 8.
- 10 S—Drug Assaying, b 5, 1:15–3:15.  
Pre. 3 and 4.  
b, The drug assaying consists mainly in acquiring knowledge and practice in the preparation of official tests and volumetric solutions and the quantitative determination of the alkaloids found in some of the crude drugs. A short course in urine analysis is given in connection with drug assaying.  
Pharmacopœia.  
Lyon's Pharmaceutical Assaying.  
Schimp's Volumetric Analysis.

### Department of Physics and Electrical Engineering (Ph.)

PROFESSOR MATHEWS; MR. HOY.

The various courses offered by this department are designed for four classes of students.

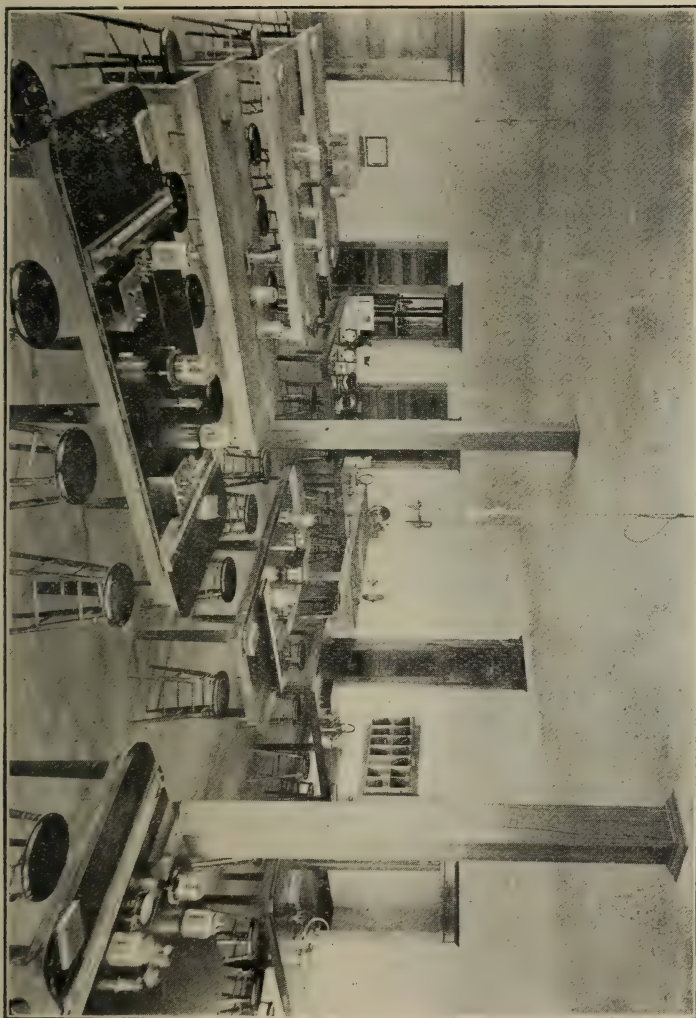
First—Those desiring a scientific training where physics is necessary as a foundation subject.

Second—Those expecting to gain some knowledge of the principles of physics and to fit themselves as teachers of science in our high schools.

Third—Those wishing to make physics their major subject.

Fourth—Those desiring to fit themselves for Electrical Engineers.

From the fact that physics is one of the foundation sciences and that a knowledge of its laws is necessary to every student seeking a scientific training, the department has been well fitted with rooms and appliances to provide this training. Its lecture rooms are well provided with arm-rest chairs. The laboratories are well lighted and provided with



GENERAL PHYSICS LABORATORY



non-vibratory piers. Water, gas and electricity are provided for the recitation rooms and the dark room and laboratories.

This department is housed in the engineering and physics building. Its facilities for instruction are equal to those of any in the Northwest.

The laboratory equipment includes such expensive pieces as analytical balances, laboratory clock making electrical contact every second, cathetometer, spectroscopes, microscope, photometers, stereopticon (arc light), Carhart-Clark standard cells, several different types of dynamos, electromotors, transformers, galvanometers, storage battery, induction coils, ammeters, magnetometers, voltmeters, wattmeters, Wheatstone bridges, polariscope, quadrant electrometer, lathes and wireless telegraphy and X-Ray apparatus.

A desirable arrangement of work for those who wish to take electrical engineering is shown on page 55. The following is the list and descriptions of the courses offered in this department:

- 1 F.--Elementary Physics  $\left\{ \begin{array}{l} \text{a } 3, 9:30-10:30 \\ \text{b } 2, 1:15- 3:15 \end{array} \right\}$  Prof. Mathews.

Pre. Ms 2.

a, Properties of matter, mechanics of solids, and mechanics of fluids.

b, Laboratory work showing principle phenomena and proving laws governing them in properties of matter, mechanics of solids and mechanics of fluids.

Carhart and Chute's High School Physics.

Chute's Practical Physics—Laboratory Manual.

- 2 W.—Elementary Physics  $\left\{ \begin{array}{l} \text{a } 3, 8:30-9:30 \\ \text{b } 2, 8:00-9:30 \end{array} \right\}$  Prof Mathews.

Pre. 1.

a, Heat, sound and light

b, Laboratory work in heat, calorimetry, velocity of sound, color, refraction and reflection of light.

Carhart and Chute's High School Physics.

Chute's Practical Physics—Laboratory Manual.

- 3 S.—Elementary Physics  $\left\{ \begin{array}{l} \text{a } 4, 10:30-11:30 \\ \text{b } 1, 1:15- 3:15 \end{array} \right\}$  Prof. Mathews.

Pre. 2.

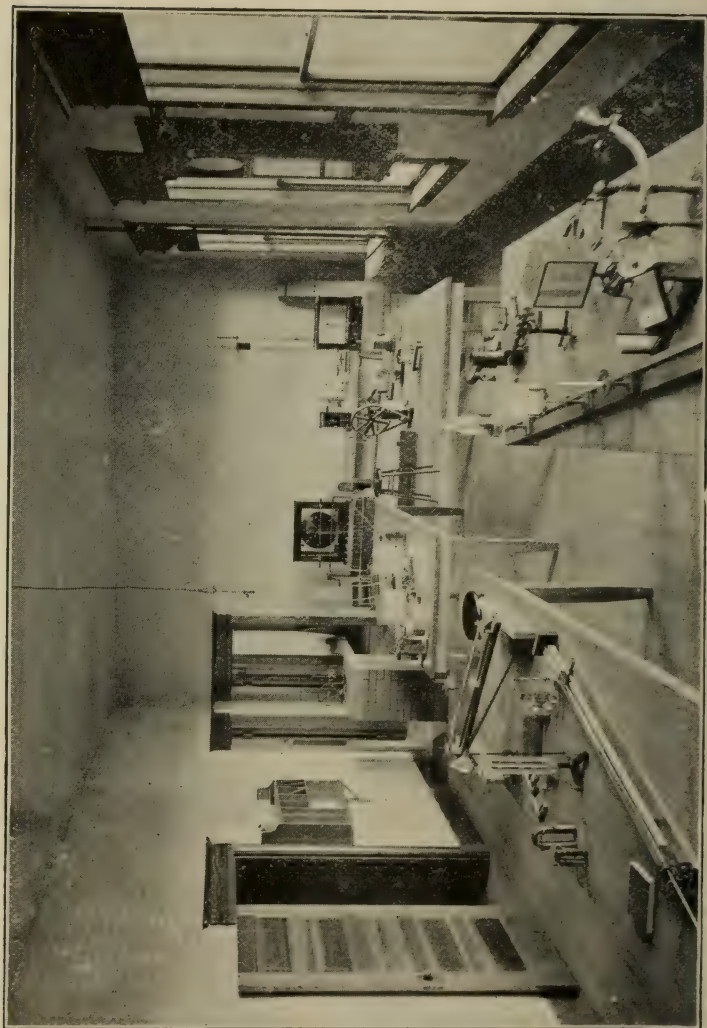
a, Electricity and Magnetism

b, Magnetism, static electricity, arrangement of batteries, detection of the electric current and its direction, induced currents and measurements of electrical resistances.

Carhart and Chute's High School Physics.

Chute's Practical Physics—Laboratory Manual

- 4 F—General Physics  $\left\{ \begin{array}{l} \text{a 3, 8:30-9:30} \\ \text{b 2, 8:00-9:30} \end{array} \right\}$  Professor Mathews.  
 Pre. 1, 2, 3, and Ms. 7.  
 a, Mechanics of solids and fluids and heat with numerous examples.  
 b, Exact measurements of mass, distance, time, calorimetry, etc.  
 Hastings and Beach.  
 Austin and Thwing.
- 5 W,—General Physics,  $\left\{ \begin{array}{l} \text{a 3 10:30-11:30} \\ \text{b 2, 1:15-3:15} \end{array} \right\}$  Professor Mathews.  
 Pre 4.  
 a, Electricity and its applications in the dynamo, motor and transformer, electric light and study of electrical and magnetic fields.  
 b, Laboratory work on topics mentioned in (a.)  
 Hastings and Beach.  
 Austin and Thwing.
- 6 S—General Physics,  $\left\{ \begin{array}{l} \text{a 4, 8:30-9:30} \\ \text{b 1, 8:00-9:30} \end{array} \right\}$  Professor Mathews.  
 Pre. 5.  
 a, Nature and velocity of sound, refraction and reflection of light, interference and color.  
 b, Laboratory work on topics mentioned in (a)  
 Hastings and Beach.  
 Austin and Thwing.
- 7 F.—Advanced Physics, a 5, 10:30-11:30 Professor Mathews.  
 Pre. 6.  
 a, Magnetism, electricity, electrolysis, induction currents, primary batteries, electric oscillations and waves.  
 Nichols and Franklin Vol II.
- 8 W.—Advanced Physics,  $\left\{ \begin{array}{l} \text{a 3, 9:30-10:30} \\ \text{b 2, 1:15-3:15} \end{array} \right\}$  Professor Mathews.  
 Pre. 6, Ms. 7 and 11  
 a, Mechanics, kinematics, kinetics, mechanics of fluids and heat and its applications.  
 b, Laboratory work and measurements covering topics mentioned in (a).  
 Nichols and Franklin, Vol. I.  
 Nichols' Laboratory Guide.
- 9 S.—Advanced Physics.  $\left\{ \begin{array}{l} \text{a 4, 9:30-10:30} \\ \text{b 1, 1:15- 3:15} \end{array} \right\}$  Prof. Mathews.  
 Pre 8.  
 a, Nature and motion of sound, physical theory of music, nature and propagation of light, refraction, reflection, interference, color and polarization.  
 b, Laboratory work on topics of (a).  
 Nichols and Franklin, Vol. III.  
 Nichols' Laboratory Guide.
- 10 F.—Heat  $\left\{ \begin{array}{l} \text{a 3, 3:15-4:15} \\ \text{b 2, 1:15-3:15} \end{array} \right\}$  Prof. Mathews.  
 Pre. 7 and Ms. 11.



ADVANCED PHYSICS LABORATORY

a, Sensible and latent heat, dynamical generation of heat, thermometry, calorimetry, specific heat, atomic and molecular heat capacities, evaporation, ebullition, vapor densities, cooling, diathermacy, conductivity and dynamical equivalent of heat.

b, Laboratory work covering topics mentioned in (a).

Prcston's Theory of Heat.

Maxwell's Heat.

- 11 W.—Sound  $\left\{ \begin{array}{l} \text{a } 3, 3:15-4:15 \\ \text{b } 2, 1:15-3:15 \end{array} \right\}$  Prof. Mathews.

Pre. 9 and Ms. 11.

a, A mathematical study of sound and theory of music

b, Advanced laboratory work in sound.

- 12 S.—Light  $\left\{ \begin{array}{l} \text{a } 3, 3:15-4:15 \\ \text{b } 2, 1:15-3:15 \end{array} \right\}$  Prof. Mathews

Pre 9 and Ms. 11.

a, Shadows and images, spectrum, velocity of light, color, phosphorescence, fluorescence, diffraction, measuring waves, prisms and polarization.

b, Laboratory work along same line as (a).

Preston's Light.

- 13 W.—Dynamo Design, b 5, 1:15-3:15, Mr. Hoy.

Pre. 16.

- 14 W.—Dynamo Electric Mach  $\left\{ \begin{array}{l} \text{a } 3, 10:30-11:30 \\ \text{b } 2, 9:30-11:30 \end{array} \right\}$  Mr. Hoy.

Pre 13 and Ms. 11.

a, Theory, magnetic circuit, equation and computation of parts of a dynamo, construction of armature and field magnets and types of dynamos.

b, Computation and construction of parts of small dynamos.

- 15 S.—Dynamo Electric Mach.  $\left\{ \begin{array}{l} \text{a } 3, 1:15-2:15 \\ \text{b } 2, 1:15-3:15 \end{array} \right\}$  Mr. Hoy.

Continuation of course 14.

- 16 F—Alternating Currents  $\left\{ \begin{array}{l} \text{a } 3, 9:30-10:30 \\ \text{b } 2, 1:15-3:15 \end{array} \right\}$  Mr. Hoy.

Pre. 15 and Ms 11.

a, Theory of alternating currents, and the study of dynamos, motors, transformers, etc.

b, Laboratory work on topics of (a)

Jackson's Alternating Currents.

- 17 W.—Elec. Light and Power Dist  $\left\{ \begin{array}{l} \text{a } 3, 8:30-9:30 \\ \text{b } 2, 8:00-9:30 \end{array} \right\}$  Mr. Hoy.

Pre. 16 and Ms. 11.

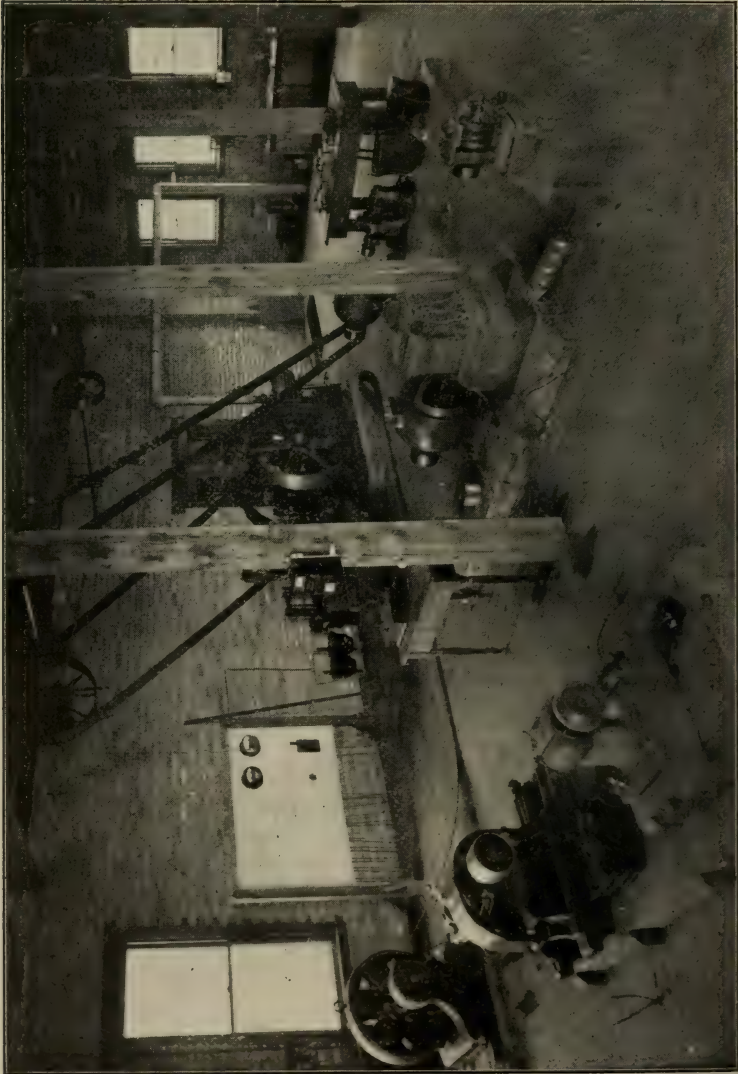
a, Electric lighting, methods of wiring, efficiency of transmission, cost of material, and construction.

b, Laboratory work on topics of (a)

- 18 S —Design of Power Stations  $\left\{ \begin{array}{l} \text{a } 3, 8:30-9:30 \\ \text{b } 2, 8:00-9:30 \end{array} \right\}$  Mr. Hoy.

a, Location of Power Plant. Best arrangement of machinery to conserve cost, space, etc.





DYNAMO ROOM

- b, Drawing room work in designing
- 19 S.—Engineering Physics, a 5, 10:30–11:30. Mr. Hoy.  
a, Topics selected and discussed in elementary physics of particular value to those taking the short course in Steam Engineering.

Preparatory Department  
(Pr.)

PROFESSOR FORSEE.

The work in this department is prerequisite to all the other courses offered. Standings from the public schools in the state, at the discretion of the principal of the department, may be accepted, and due credit given for the same grade of work completed therein. The students of this department are under the immediate charge of an experienced member of the faculty, who superintends the methods of work, and strives to secure the forming of correct habits of work and life on the part of all. Students will not be admitted to this department until they have completed the 8th grade work in the public schools.

A class in Elementary Algebra will be formed at the beginning of the Fall term and continue their work throughout the year.

The Franklin Literary Society is made up entirely of preparatory, sub-freshman and short-course students.

The following courses are offered:

FALL TERM

- Ms. 1, Algebra, a 5, 8:30–9:30.  
For description of work see Ms. 1, Department of Mathematics.
- 2 English, a 5, 10:30–11:30.  
Pre. a fair knowledge of Elementary Grammar.  
a, Technical Grammar.  
General Review of Etymology, including analysis, parsing and construction of sentences. Syntax.  
Buehler's English Grammar.
- 3 History, U. S., a 5, 1:15–2:15.  
Pre. A general knowledge of the early history of the U. S.  
a, Revolutionary war and the war of 1812 The industrial development of our country, the long struggle with slavery, the indestructibility of the Union, the economic struggle, the growth of the Northwest.
- 4 Book-keeping, a 5, 8:30–9:30.  
a, Single and double entry sets in actual business.  
Benton's High School Edition.

Military 3, or Physical Culture 2.

- 11 Orthography, a 2, 2:15-3:15.

WINTER TERM.

- Ms 1. Algebra, a 5, 8:30-9:30.

For description of work see Ms. 1, Department of Mathematics.

- 5 English, a 5, 9:30 10:30.

a, Practical applications of course 2 from fall term's work, such as choice of words, meaning of words, preferred usages of words according to best authorities.

Buehler's Practical Exercises

- 6 Civics, a 5, 1:15-2:15.

a, General principles of government, state government, branches of government, the national government, principles of law, municipal law, international law, completion of the text.

- 7 Book-keeping, a 5, 8:30-9:30.

Repetition of course 4. May be taken by those who did not take the work during the Fall Term.

Benton's High School.

Military 3, or Physical Culture 2.

- 12 Orthography, a 2, 2:15-3:15

SPRING TERM.

- 8 Elementary Physiology, a 5, 1:15-2:15.

a, The anatomy of the chief structures of the human body and their physiology.

Blaisdell.

- 9 English Interpretation, a 5, 8:30-9:30.

Pre. 2 and 5.

a, Continuation of course 5. The class will take up higher work in preparation for Eh. 1. Exercises will consist of such work in construction and composition as may be required by the instructor in charge.

- Ms. 2, Algebra a 5, 10:30-11:30.

For description of work see Ms. 2. Department of Mathematics.

- 10 Physical Geography, a 5, 9:30-10:30.

a, Physiography of United States.

Gilbert and Brigham.

Military 5, or Physical Culture 2

---

### SUB-FRESHMAN YEAR.

The work of this year is required for admission to the Commercial department and to the regular College courses. It includes subjects which no student can well omit, however technical a training is desired. These courses serve as a foundation upon which the higher work is based, and so taught as to stimulate the desire of the student toward this broader

education. At the same time the work is thoroughly practical to every walk of life.

## FALL TERM.

El. Physics, (Ph. 1, a 3, b 2) .....	8:00-9:30
Algebra, (Ms 3, a 5) .....	9:30-10:30
Rhetoric, (Eh. 1, a 5) .....	10:30-11:30
Carpentry, (Me. 1, b 3) or.....	
F. H. Drawing, (Ar. 1, b 3) or.....	
Cooking, (Ds. 13, a 2) .....	1:15-3:15
Military 3, or Physical Culture 2.....	3:15-4:15

## WINTER TERM.

El. Physics, (Ph. 2, a3, b 2).....	8:00 9:30
Geometry, (Ms. 4, a 5).....	9:30-10:30
Rhetoric, (Eh. 2, a 5) .....	10:30-11:30
Carpentry, (Me. 1, b 3) or.....	
F. H. Drawing, (Ar. 1, b 3).....	1:15-3:15
Military 3, or Physical Culture 2.....	3:15-4:15

## SPRING TERM.

American Literature, (Eh. 4, a 5).....	8:30-9:30
Geometry, (Ms 5, a 5) .....	9:30-10:30
El. Physics, (Ph 3, a 4, b 1).....	10:30-11:30
Rhetoric, (Eh 3, a 3).....	2:15-3:15
Military 5, or Physical Culture 2.....	3:15-4:15

Department of Zoology and Veterinary Medicine  
(Zo.)

DR. MOORE; MR. MILLER

The Zoological department is equipped with microscopes, dissecting instruments, sliding microtome, imbedding apparatus, incubators, autoclave, sterilizers, fossils, models, charts, specimens, etc.

The veterinary department occupies a separate two-story building with a hospital in connection. The operating room is furnished with an operating table, hobbles, slings and instruments for surgical work. Free clinics are held each Saturday at which the veterinary students assist and perform operations under the direction of the instructor. By a judicious selection of courses in this and other departments students expecting to enter schools of veterinary and human medicine can secure an equivalent to the first year's work in these institutions.

The following courses are offered:



- 1 F—Zoology,  $\left\{ \begin{array}{l} \text{a } 2, 10:30-11:30 \\ \text{b } 3, 10:30-12:00 \end{array} \right\}$  Mr. Miller

- 2 W.—Zoology,  $\left\{ \begin{array}{l} \text{a } 2, 2:15-3:15 \\ \text{b } 3, 1:45-3:15 \end{array} \right\}$  Mr. Miller.

Pre. for 1., All required work below the Sophomore year with the exception of engineering students

This course includes a general survey of the phyla of the animal kingdom, and also the elements of vertebrate histology and embryology. Types of invertebrates are studied during the fall term: vertebrates and the elements of vertebrate embryology during the winter.

Hertwig and Kingsley, Handbook of Zoology.

- 3 S.—Physiology,  $\left\{ \begin{array}{l} \text{a } 4, 8:30-9:30 \\ \text{b } 1, 8:00-9:30 \end{array} \right\}$  Mr. Miller

The physiology of the cell. Special physiology of circulation, respiration, digestion, absorption, metabolism, excretion and sensation.

Lectures, recitations, demonstrations.

Text to be announced.

- 4 F—Anatomical Methods,  $\left\{ \begin{array}{l} \text{a } 2, 10:30-11:30, \text{ b } 3, 10:30-12:00 \\ \text{b } 3, 10:30-11:30, \text{ b } 2, 9:30-11:30 \end{array} \right\}$   
5 Mr. Miller.

Required in the Pharmacy course and may be elected by those intending to study medicine or dentistry.

Davison, Mammalian Anatomy.

References—Jayne, Mammalian Anatomy; Wilder and Gage, Anatomical Methods; Gray, Human Anatomy; Quain's Anatomy.

- 6, 7, 8, Histology, a and b 5. Mr. Miller.

Pre. 3 or 6.

Can be elected only as a course extending throughout the year. Most of the material must be prepared by the student himself and he will be required to present at least 100 slides.

Bohm Davidoff, Text Book of Histology.

References—Wilson, The Cell; Hertwig, The Cell, Piersol, Text-Book of Histology; Schafer, Text-Book of Histology.

- 9 F.—Bacteriology,  $\left\{ \begin{array}{l} \text{a } 2, 8:30-9:30 \\ \text{b } 3, 8:00-9:30 \end{array} \right\}$  Dr. Moore and Mr. Miller.

Pre. Ch. 4.

a, Lectures and recitations.

b, Laboratory methods and technique.

- 10 F.  $\left\{ \begin{array}{l} 3:15-4:15 \\ 3:15-4:15 \end{array} \right\}$   
W  $\left\{ \begin{array}{l} 3:15-4:15 \\ 1:15-2:15 \end{array} \right\}$  Dairy Bacteriology, a 2  $\left\{ \begin{array}{l} 3:15-4:15 \\ 1:15-2:15 \end{array} \right\}$  Mr. Miller.  
S

a, Lectures, recitations and demonstrations

Russell's Dairy Bacteriology.

- 11, 12, 13, 14, 15, 16 F., W, S.—Veterinary Anatomy, a and b 5, 1:15-3:15. Dr. Moore.

b, Conducted as far as possible by the laboratory method with frequent quizzes. This can be elected as a full course throughout two years.

- 17 S. Veterinary Physiology, a 5, 8:30-9:30. Dr. Moore.  
Pre. Zo. 2; Ch 3; Ph. 3.  
a, The principles of physiology as applied to the domestic animals.  
F. Smith's Manual of Veterinary Physiology.
- 18 F.—Principles of Horseshoeing, a 2, 2:15-3:15. Dr. Moore.  
a, Anatomy of the foot, its care and preparation, fitting of shoes;  
normal and pathological shoeing
- 19 W.—Veterinary Medicine, a 3, 2:15-3:15. Dr. Moore.  
Pre. Zo. 13. Diseases of locomotory apparatus.
- 20 S.—Veterinary Medicine, a 3, 2:15-3:15 Dr. Moore.  
Pre. Zo. 13. Diseases of the digestive system.
- 21 F.—Veterinary Medicine, a 5, 1:15-2:15. Dr. Moore.  
a, Contagious and infectious diseases with special reference to  
their eradication and control.
- 22 W.—Veterinary Medicine, a 3, 1:15-2:15. Dr. Moore  
a, Animal parasites, their life history, treatment and control.
- 23 W.—Veterinary Medicine, a 5, 8:30-9:30. Dr. Moore  
a, This course has been designed for the short course students in  
Agriculture and includes a discussion of the common diseases of  
farm animals.  
Reynolds' Veterinary Studies.

## Student Organizations

---

### INDUSTRIAL COLLEGIAN

Bee Bonesteel	-	-	-	-	Editor-in-Chief
John Sperb	-	-	-	-	Business Manager

### ATHLETIC ASSOCIATION

Wm. N. Cooley	-	-	-	-	President
Volney Tuttle	-	-	-	-	Secretary
Oliver Grace	-	-	-	-	Treasurer
Fred Coller, Pres. State Inter-Collegiate Athletic Association					

### ORATORICAL ASSOCIATION

G. Malcolm Aldrich	-	-	-	-	President
Ruth Westcott	-	-	-	-	Secretary

### BAND

J. P. Mann	-	-	-	-	Leader
------------	---	---	---	---	--------

### YOUNG MEN'S CHRISTIAN ASSOCIATION

Clare McCordic	-	-	-	-	President
Elmer E. Avery	-	-	-	-	Secretary

### YOUNG WOMEN'S CHRISTIAN ASSOCIATION

Genevieve Underwood	-	-	-	-	President
Inga Kartrude	-	-	-	-	Secretary

### ATHENIAN LITERARY SOCIETY

Elmer E. Avery	-	-	-	-	President
Mabelle Hall	-	-	-	-	Secretary

### MILTONIAN LITERARY SOCIETY

John Sperb	-	-	-	-	President
Frances West	-	-	-	-	Secretary

## FRANKLIN LITERARY SOCIETY

John Tyler	-	-	-	-	-	President
Mabel Amundson	-	-	-	-	-	Secretary

## ART CLUB

Louise Phillips	-	-	-	-	-	President
Ruth Peirce	-	-	-	-	-	Secretary

## EUTERPE SOCIETY

G. R. Westcott	-	-	-	-	-	President
Mary Johnson	-	-	-	-	-	Secretary

## PHARMACY CLUB

Gladys Davies	-	-	-	-	-	President
M. J. Wipf	-	-	-	-	-	Secretary

## CIVIL ENGINEERS' CLUB

G. Malcolm Aldrich	-	-	-	-	-	President
John Sperb	-	-	-	-	-	Secretary

---

Battalion Roster

## COMMANDANT

Geo. D. Guyer, Captain Sixteenth U. S. Infantry

## BATTALION STAFF

Major	-	-	-	-	Cadet Grant J. Morton
1st Lieutenant and Adjutant	-	-	-	-	Cadet Charles G. Johnson

## NON COMMISSIONED STAFF

Sergeant Major	-	-	-	-	Cadet Edward E. Malum
Color Sergeant (National)	-	-	-	-	Cadet Clarence A. Marden
Color Sergeant (Battalion)	-	-	-	-	Cadet Jesse B. Estes

## COMPANY "A"

Captain	-	-	-	-	Cadet Lindsey Whitehead
1st Lieutenant	-	-	-	-	Cadet Clarence A. Carpenter
2nd Lieutenant	-	-	-	-	Cadet William H. Bond



1st Sergeant	-	-	-	-	Cadet Elmer E. Avery
Q. M. Sergeant	-	-	-	-	Cadet Darwin W. Ulrich
Sergeant	-	-	-	-	Cadet Ray W. Roney
Sergeant	-	-	-	-	Cadet Bartlett L. Harben
Sergeant	-	-	-	-	Cadet Oscar R. Mathews
Sergeant	-	-	-	-	Cadet Francis Walker
Corporal	-	-	-	-	Cadet Robert D. Jones
Corporal	-	-	-	-	Cadet Frank A. Brady
Corporal	-	-	-	-	Cadet Alonzo Poage
Corporal	-	-	-	-	Cadet Howard C. Lohr
Corporal	-	-	-	-	Cadet Carl G. Buchholz
Corporal	-	-	-	-	Cadet Josh Trumm

## COMPANY "B"

Captain	-	-	-	-	Cadet Samuel Newton
1st Lieutenant	-	-	-	-	Cadet Charles H. Brown
2nd Lieutenant	-	-	-	-	Cadet John P. Furnstahl
1st Sergeant	-	-	-	-	Cadet Ralph W. Chilcott
Q. M. Sergeant	-	-	-	-	Cadet Ray Hall
Sergeant	-	-	-	-	Cadet Clarence A. Marden
Sergeant	-	-	-	-	Cadet Fay Atkinson
Sergeant	-	-	-	-	Cadet Edward Nilsson
Sergeant	-	-	-	-	Cadet Hiram G. Parry
Corporal	-	-	-	-	Cadet Leonard J. Fridley
Corporal	-	-	-	-	Cadet Robert S. Watson
Corporal	-	-	-	-	Cadet F. J. Locke
Corporal	-	-	-	-	Cadet Owen Hyde
Corporal	-	-	-	-	Cadet Joe Swering
Corporal	-	-	-	-	Cadet Jas. P. Murphy

## COLLEGE ALUMNI

### ALUMNI ASSOCIATION.

Norman M. Wardall, '90	President
Shirley B. Miller, '03	First Vice President
Macy (Cranston) Crane, '89	Second Vice President
Lewis N. Jensen, '05	Third Vice President
Hubert B. Mathews, '92	Secretary and Treasurer

### GRADUATES.

#### Master of Science (M. S.)

Aldrich, John M., '91	Prof. Entom. U. Idaho, Moscow, Io.
Brown, James A., '96	Attorney, Lincoln, Neb.
Chilecott, E. C., '98, Agronomist, in charge of Dry Land Agriculture, Department of Agriculture, Washington, D. C.	
Crane, Austin B., '03	Prof. Civil and Agr'l. Eng. S. D. A. C.
Davis, Homer, '97	Physician, Genoa, Neb.
Griffiths, David, '03, Assistant Agrostologist, Department of Agriculture, Washington, D. C.	
Harkins, Lilla A., '98, Prof. Domestic Science, Montana Agricultural Col., Bozeman, Mon.	
Hepner, Frank E., '02, Ass't Station Chemist, Univ. of Wyoming, Laramie, Wy.	
Hoy, Howard H., '03	Instructor in Phys. and El. Eng., S. D. A. C.
Knox, William H., '01	Orange Grower, Fresno, Cal.
Luke, Fred K., '96	Farmer, Kalispell, Mont.
Mathews, Hubert B., '99, Vice President; Prof. of Phys. and El. Eng., S. D. A. C.	
Mathews, Eva (Plocker), '94	Brookings
McKenney, Dustin W., '89, Principal C. M. Schwab Manual Training School, Homestead, Pa.	
Norton, Frank A., '03, Chemist for National Canning Co., Aspinwall, Pa.	
Phillips, C. Louise, '01	Teacher, Brookings
Parsons, Thomas S., '98	Science Teacher, Durango, Col.
Robertson, Ada N., '96	Teacher, East Helena, Mont.
Schoppe, W. J. A., '95, Observer, United States Weather Bureau, Iola, Kan.	
Sproul, Alex. H., '95, Head of Commercial Department, Shortridge H. S. Indianapolis, Ind.	
Tanzy, Hattie (Dibble), '99	Canton
Thompson, Clarence, '04	Farmer, Dell Rapids
Thornber, Walter S., '99, Prof. of Horticulture, Washington Agricultural	

## College, Pullman

Walter, L. Erving, '04	Farmer, Talcott
Whitehead, Bower T., '01	Prof. of Pharmacy, S. D. A. C.
Whitten, John C., '99	Prof. Hort. U. Missouri, Columbia
Williams, Effie (Snell), '96	Florist, Memphis, Neb.
Wilcox, Ernest W., '96	Farmer, Thawville, Ill.
Wolgemuth, Lee E., '91, Mechanical Engineer, C., St. P., M. & O., Ry., St. Paul, Minn.	

## Bachelor of Science (B. S.)

Adams, Edith (Riemann) '98	Antwerp, Belgium
Ainsworth, Cephas B., '97, Deputy Treasurer	Aberdeen
Ainsworth, Howard, '98	Street Car Conductor, Chicago, Ill.
*Aldrich, Ellen (Roe), '89	
Aldrich, Irwin D., '91, Editor and Secretary Regents of Education, Big Stone	
Aldrich, John M., '88	Prof. of Biology U. of Idaho, Moscow
*Allen, Wm. C., '89	
Allen, Hart M., '00	Drug Clerk, Winters, Cal.
Allison, Wm. F., '96, Prof. Civil Engineering, Colorado School of Mines, Golden	
Allison, Mabel (Hegeman), '98	Golden, Col.
Almond, Fred C., '03, Elec. Eng., Wisconsin Central Telephone Co., Milwaukee, Wis.	
*Anderson, Clark W., '00	
Arnold, Katie (Boswell), '89	Estelline
Atkinson, Jesse C., '96	Civil Engineer, Chicago, Ill.
Atkinson, Geo. W., '97	Contractor, Springfield
Atkinson, Walter, '97	Civil Engineer, Chicago, Ill.
Austin, Steven E., '92	Machinist, Iowa
Bagley, Susie, '01	Teacher, Chicago
Bates, Edmund T., '93	Farmer, Onslow, Iowa
Bacon, Nora (Updyke), '91	Pueblo, Col.
Beck, Milton, '93	Chief Engineer, Alamo Mfg. Co., Hillsdale, Mich.
Beck, Louis, '98, Gasoline Engine Expert, Fairbanks Morse Co., Beloit, Wis.	
Beebe, Jay L., '00	Physician, Anaheim, Cal.
Bell, William D., '91	Editor, St. James, Minn.
Bentley, Williams S., '91	Physician Soldiers' Home, Hot Springs
Binford, William W., '04, Instructor in Manual Training. Public Schools, Denver, Col.	
Bolles, Myrick N., '98, Mining and Metallurgical Engineer, Monterey, Mex.	
Bolles, Laura Jane, '01	Teacher, Colman
Boyd, Mary, '01	Teacher, Brookings
Boyden, Frank E., '97	Physician and Surgeon, Rochester, Minn.

\*Deceased

Boyden, Guy L., '05	Principal of Schools, Aurora
Boyden, Maude (Hegeman), '98	Brookings
Brosseau, Jesse E., '01	Medical Student, Chicago, Ill.
Brown, Cyrus O., '94	Attorney, Burwell, Neb.
Brown, Ida (Dibble), '96	Lincoln, Neb.
Brown, James A., '94	Attorney, Lincoln, Neb.
Brown, Sara, '95	Teacher, Shannon City, Ia.
Brooke, Grace (Lawshe), '89	Cashier Dep't Store, Brookings
Bullen, Grace (Young), '97	Brookings
Carlson, Ella, '00	Teacher, Minneapolis, Minn.
Carlson, Esther, '00,	Teacher, Minneapolis, Minn.
Carter, Louis W., '96	Farmer, Highmore
Chappell, Bessie, '05,	Teacher, Brookings
Cole, John S., '03	Special Agt. Dep't of Agriculture, Brookings
Clevenger, John W., '97	Dentist, Chamberlain
Cornell, Harry M., '95	Cashier, Russell, N. D.
Crane, Austin B., '91	Prof. Civil and Agr. Eng. S. D. A. C.
Crane, Elsie (Curtiss), '98	Brookings
Crane, May (Cranston), '89	Brookings
Crane, Margaret (Davidson), '98	Spokane, Wash.
Cross, Alvah G., '89	
Crowley, Cassie (Madden), '97	Fargo, N. D.
Cuckow, Fred W., '03	Lawyer, Elkton
Culhane, Michael E., '01	Lawyer, Brookings
Cunningham, Sarah (Haber), '89	Spokane, Wash.
Davies, Autumn, '01	History Student, Lincoln, Neb.
Davies, Mary, '00, Instructor History and Literature, Falls City High School, Falls City, Neb.	
Davis, Clifford W., '05	Farmer, Brookings
Davis, Homer, '91	Physician, Genoa, Neb.
Davis, Samuel H., '92	Farmer, Plankinton
Day, John M., '90	Teacher, Mellette
DeLa, John W. H., '00	Editor, Balfour, N. D.
Dillon, Willis C., '91	Attorney, Omaha, Neb.
Dibble, Hettie (Doughty), '91	Parker
Dodge, Fred E., '01	Hotel Keeper, Redfield
Doughty, Matthew W., '00	Civil Engineer, Scranton, Penn.
Downing, Jennie C., '96	Rathdum, Idaho
Drew, Letta (Colegrove), '03	Brookings
Edgerton, Wm. M., '93	Physician, Faulkton
Egeberg, Hildus, '90	Farmer, Brookings
Elliott, Roy K., '05	Electrician, West Lynn, Mass.
Else, Earl, '01	House Physician, Cook County Hospital, Chicago, Ill.
Eno, Durell G., '89	Farmer, Platte
Enos, Winifred, '01	Teacher, Brookings
Erickson, Martin L., '01	Student in Forestry, Yale



Fassett, Della M., '05	Teacher, Brookings
Findeis, Phillip, '99	Lumber Merchant, Mirando
Fishback, Myra, '01, Y. M. C. A. Secretary for North Dakota, Brookings	
Fishback, Van Dusen, '05	Student, Dartmouth, N. H.
Fjerestad, Hans C., '98	Grocer, Sioux Falls
Fleming, Michael E., '02	Postal Clerk, St. Paul, Minn.
Forrest, Victor E., '05	Civil Engineer, Ft. Pierre
Fourt, Fanny (Shannon), '91	Fairfield, Ia.
Fulkerson, Vincent, '05	Teacher, Mandan, N. D.
George, William A., '02	Physician, Evarts
Grady, Francis A., '89	Attorney, Red Lake Falls, Minn.
Griffiths, David, '92	Assistant Agrostologist, Agr. D't., Washington
Graftan, Paul H., '96	Collector, Elkton
Grove, Frank W., '00	Dentist, Wausa, Neb.
Grove, Mary I., '05	Teacher, White
Haasarud, Ole H., '90	Farmer, Rushford, Minn.
Haberlein, Alice (Robinson), '91	Aguas Calientes, Mex.
Hage, Christian F., '05	Lumberman, Steele, N. D.
Hamlin, John R., Jr., '92	R. R. Station Agent, Pima, Ariz.
Hann, Jay B., '91	Photographer, Bellingham, Wash.
Harding, Albert S., '92, Prof. of History and Political Science, S. D. A. C.	
Harding, Neva (Whaley), '97	Brookings
Harding, Charles J., '98	Teacher, Brookings
Harkins, Lilla A., '90, Prof. of Dom. Sci. Montana Agricultural College, Bozeman	
Hart, Bertrand M., '02	Physician, Blunt
Harza, Carl, '00	Electrician, Detroit, Mich.
Harza, LeRoy Francis, '01	Student Civil Eng., Madison, Wis.
Hatfield, Ira H., '92	Attorney, Lincoln, Neb.
Hatton, John Henry, '01, Division of Forestry, Department of Agriculture, Washington	
Hazel, Flora (Ainsworth), '98	Aberdeen
Hazel, William A., '97	Deputy Sheriff, Aberdeen
Hegeman, Harry A., '96, First Lieutenant 19th Infantry, U. S. A. Manila, P. I.	
Hepner, Frank E., '02, Asst. Station Chemist Univ. of Wyoming, Laramie	
Hewes, Lulah (Wellman), '88	Mayville, N. Y.
Hodgeson, Gustava (Olson), '00	Washington, D. C.
Hodgeson, Herbert H., '98	U. S. Geol. Survey, Washington, D. C.
Holm, Andrew B., '96	Pharmacy Student, S. D. A. C.
Hopkins, Mrs. C. G., '94	Champaign, Ill.
Hopkins, Cyril G., '90, Prof. of Agronomy, Chemist. and Vice Director of U. S. Experiment Station, U. of Illinois, Champaign	
Houston, Grant, '91	Physician, Joliet, Ill.
Howg, Edwin M., '05	Medical Student, Chicago, Ill.
Hoy, Nora (Mathews), '96	Brookings

- Hoy, Howard H., '06 Asst. in Phys. and El. Eng., S. D. A. C.
- Hubbart, Minnie E., '03 Teacher, Willow City, N. D.
- Husted, Harley H., '97 Musician, Lincoln, Neb.
- Irish, Henry C., '91, Superintendent Missouri Botanical Gardens, St. Louis
- Irish, Maggie (Duffey), '90 St. Louis, Mo.
- Jenkins, John C., '90 Attorney, Brookings
- Jensen, Lewis N., '05 Lincoln, Neb.
- Johnson, Carl L., '05 Electrician, Schenectady, N. Y.
- Johnson, Clara (Johnson), '02 Jamestown, N. D.
- Johnson, Edward, '02, Graduate Student of Chicago Univ. of Chicago.
- Chicago, Ill.
- Johnson, Isaac, '03 Lumberman, Jamestown, N. D.
- Jolley, Wm. G., '97 Farmer, Linton, N. D.
- Keeney, Emma A., '92 Physician, Albert Lea, Minn.
- Kelton, Maude (Bushnell), '04 Henry
- Kendall, Clinton D., '00 Druggist, Brookings
- Kendall, Leonard J., '01 Telegraph Operator, Brookings
- Kendall, M. Krete, '03 Brookings
- Kennedy, C. LeRoy, '01 Bank Clerk, Madison
- Kenyon, Arthur H., '90 Lawyer, Spokane, Wash.
- Kephart, George, '02 Superintendent City Schools, Beresford
- Knox, Wm. H., '98 Orange Grower, Fresno, Cal.
- Knox, Elinor (Williams), '94 Washington, D. C.
- Korstad, Hans, '89 Editor, Brookings
- Korstad, Mary, '96 Missionary, Brookings
- Langdon, Alice, '03 Teacher, Parker
- Langdon, Lillian, '01, Instructor in Stenography Sioux Falls Business College, Sioux Falls
- Lawrence, Mary M., '99 Teacher, Exa, Wash.
- Lawrence, Wm. H., '99, Instructor in Botany and Ass't Botanist in Ex. Station, State College, Pullman, Wash.
- Lawrence, Claude W., '98, Instructor in Agronomy and Cerealist of the Ex. Station, State College, Pullman, Wash.
- Lawrence, Clay, '98 Lawyer, Seattle
- Lawrence, Phillip A., '88 Attorney, Brookings
- Lawrence, Jessie, '00 Instructor in High School, Snohomish, Wash.
- Larson, Lars K., '89 Bank Cashier, Dell Rapids
- Lee, Berton E., '02 Drug Clerk, Arlington
- Lee, Rhoda (Johnson), '01 Arlington
- Lewis, Perry, '91 Tinner, Mankato, Minn.
- Loucks, Anna Y., '04 Teacher, Altruria
- Luke, Fred K., '94 Farmer, Kalispell, Mont.
- Lusk, Willard C., '96 Editor, Yankton
- Mason, Nellie (Mason), '99 Albia, Ia.
- Madden, Margaret, '92 Teacher, Brookings
- Mathews, Alice M., '00 Teacher, Brookings

# 142 SOUTH DAKOTA AGRICULTURAL COLLEGE

Mathews, Eva (Plocker), '92	Brookings
Mathews, Harry E., '05	Las Vegas, Nev.
Mathews, Hubert B., '92, Vice President, Prof. of Physics and Electrical Eng., S. D. A. C.	
Mathews, Roscoe A., '00, Civil Engineer, Geological Survey, Great Falls, Mont.	
Mattice, Albert F., '04	Drug Clerk, Sedro-Wooley, Wash.
Merrick, Mable, (Mayland), '95	Severance, Kan.
McAndrew, James E., '92	Farmer, Iroquois
McElmurry, Loretta, '01,	Teacher, Brookings
McGarry, Lawrence R., '04	Principal of Schools, Mansfield
McKenney, Dusten, W., '89, Principal C. M. Schwab Manual Training School, Homestead, Pa.	
*McLouth, Ida B., '92	
McLouth, Benjamin F., '93	Insurance, Hartford, Conn.
McLouth, Lewis C., '89	Manufacturer, Detroit, Mich.
Miller, Ralph L., '05	Lumberman, Carrington, N. D.
Millelt, Mary (Frick), '91	Rochester, Minn.
Miller, Shirley B., '03	Assistant in Zoology S. D. A. C.
Moore, Anna (Parker), '95	Brookings
Mork, Albert A., '89	Farmer, Des Lacs, N. D.
Mork, Theodore, '01	Farmer, Des Lacs, N. D.
Morrison, Freda C., '00	Teacher, Canistota
Murphy, Matt W., '05	Stenographer, Pierre
Nachtigal, Isaac, '99	County Superintendent, Parker
Nelson, Ina (Colegrove), '99	Brookings
Nelson, John Harland.	Assistant in Mathematics S. D. A. C.
Norton, Frank A., '03	Ass't. in Chem., S. D. A. C.
Olson, Callie (Williams)	Brookings
Olson, Eva, '97	Preceptress, Grand Forks, N. D.
Otterness, Jens M., '03	Stenographer, Amery, Wis.
Orcutt, Carrie (Ross), '89	Northfield, Minn.
Paddock, Jay M., '98	Farmer, Aurora
Parsons, Thomas S., '97	Science Teacher, Durango, Col.
Peirce, E. Esther, '03	Teacher, Clear Lake
Phillips, Florence, '01	Teacher, Brookings
Phillips, C. Louise, '01	Teacher, Brookings
Pyne, Estel W., '90	Sec. and Treas. Pyne Music Co., Santa Anna, Cal.
Ramsey, Henry J., '02, Ass't. in Plant Pathology, Univ. of California, Berkeley, Cal.	
Robertson, Ada N., '93	Teacher, East Helena, Mont.
Robertson, Clarence H., '93, Science Teacher and Missionary Nan King, China	
Robertson, Edith, (Salisbury), '95	Nan King, China

Roe, Guy, W., '90	Superintendent Union Fibre Co., Winona, Minn.
Roe, Robert, '97	Stockman, Highmore
Rogers, Edmund, '89	Machinist, Milwaukee, Wis.
Ronning, Oscar E., '05	Teacher, Sisseton
Roskie, George W., '02	Abstractor, Madison
Roskie, Lina (Evans), '01	Madison
Ross, Abbie E., '89	Missionary, San Francisco, Cal.
Ruth, Thomas H., '04	Veterinary Surgeon, DeSmet
Sanborn, Ethel I., '03	Teacher, Clear Lake
Sanderson, Everett G., '04	Farmer, Brookings
Sarvis, Roscoe J., '03	Principal of Schools, Castlewood
Sasse, Enest G., '96	Physician, Lidgerwood, N. D.
Saylor, Christie (Hargis), '97	Elmo, Mo.
Saylor, Marcus A., '86, Prof. of Mining and Irrigation Engineering, New Mexico School of Mines, Socorro	!
Schaphorst, William F., '05	P. G. Student in Mech. Eng. S. D. A. C.
Schlosser, Thomas F., '92	Clergyman, Almira, Wash.
Schoppe, W. J. A., '93	Observer U. S. Weather Bureau, Iola, Kan.
Scott, Anna (Wardall), '89	Physician, Seattle, Wash.
Seeger, Adolph M., '05	Electrician, West Lynn, Mass.
Seide, Louise, W. M., '03	Teacher, Milbank
Sevy, Isaac B., '95	Clergyman, Sioux Falls
Sevy, Orpha (West), '97	Sioux Falls
Shuster, John W., '97, Asst. Prof. Elec. Eng. Univ. of Wisconsin, Madison	
Sherwin, Ralph L., '04	Civil Engineer, Scranton, Pa.
Sherwin, Howard, '99	Civil Engineer, New York, N. Y.
Sherwin, Sara (Davies), '00	New York, N. Y.
Slocum, Ina S., '05	Music Teacher, Herreid, S. D.
Smith, Alta (Mathews), '96	Las Vegas, Nev.
Smith, William H., '04	Student, Huron
Solberg, Halvor C., '91, Prof. Steam and Mechanical Engineering S. D. A. C.	
Spooner, Jennie, (Chamberlain), '91	Physician, South Haven, Mich.
Sproul, Alex. H., '94, Head of Com'l Dep't Shortridge High School, Indianapolis, Ind.	
Sproul, William T., '95, Secretary and Treasurer, Ingersoll Milling Machine Co., Rockford, Ill.	
Stoner, Minnie A., '90, Prof. of Domestic Science, University of Ohio, Columbus	
Tanzy, Hattie (Dibble), '94	Canton
*Tanzy, Marvin F., '94	
Thogerson, Arthur A., '05	Commercial Student S. D. A. C.
Thompson, Clarence, '04	Farmer, Dell Rapids
Thornber, John J., '95	Prof. of Botany U. of Arizona, Tucson
Thornber, Wm. T., '98	Farmer, Brookings



Thornber, Mary Edith, '02	Asst. in Dom. Science S. D. A. C.
Thornber, Walter S., '97, Prof. of Horticulture, State College, Pullman, Wash.	
Trooien, Ole N., '02	Asst. in Mech. Eng. S. D. A. C.
Torrence, Nettie (Sloan), '92	Redlands, Cal.
Towne, Addie (Loveland), '98	Duluth, Minn.
Towne, Judson R., '98	Electrician, Duluth, Minn.
Valleau, Vinal B., '91, Secretary to General Manager, Am. Express Co., Chicago, Ill.	
Walter, L. Erving, '04	Farmer, Talcott
Walters, Daisy, '05	Bruce
Walters, Edith, '99	Merchant, Bruce
Walters, William H., '97	Grain Buyer, Bruce
Wardell, Norman M., '90	Real Estate and City Clerk, Huron
Waters, George D., '94	Traveling Salesman, Madison
Webster, James L., '03	Minister, Verona, Wis.
West, Hugh H., '91	Physician, Elgin, Ill.
West, George H., '99	Physician, Marengo, Iowa
Westcott, George R., '03, Registrar and Ass't in Wood Shops, S. D. A. C.	
White, Alice, (Barton), '98	Brookings
Whitehead, Bower T., '97	Prof. of Pharmacy, S. D. A. C.
Whitten, John C., '92	Prof. of Horticulture U. of Missouri, Columbia
Wilcox, Alice E., '97	Teacher, Thawville, Ill.
Wilcox, Ernest N., '95	Farmer, Thawville, Ill.
Williams, Effie (Snell), '92	Florist, Memphis, Neb.
Williams, Harry, '05,	Bank Clerk, Brookings
Williams, Percy, '05	Drug Clerk, Milbank
Williamson, Albert, '96	Editor, Oacoma
Wilson, Elsie (Chappell) '04	Brookings
Winegar, Albert J., '92	Draughtsman, Fairbanks Morse Co., Beloit, Wis.
Winegar, Iaura, '02	Book-keeper, Arlington
Wolgemuth, Lee E., '91, Mechanical Engineer, C. St. P. M. & O. Ry., St. Paul, Minn.	
Work, Lloyd E., '97, Advertising Man with Chicago Inter-Ocean, Chicago, Ill.	
Young, Gilbert A., '94, Assistant Professor of Mechanical Engineering, Purdue University, LaFayette, Ind.	
Young, Maggie (Cranston), '03	Oaks, N. D.

#### Pharmacy Graduates (Ph. G.)

Allison, Wm. F., '02, Prof. of Civ. Eng. Colorado School of Mines, Golden	
Anderson, Ernest, '04	Drug Clerk, Brookings
Bentley, Wm. S.,	Physician Soldiers' Home, Hot Springs
Briggs, Elmer E., '95	Farmer, Muscoda, Wis.
Brosseau, Jessie E., '00	Physician, Chicago, Ill.

Baldwin, Corwin B., '00	Drug Clerk, Rapid City
Boyden, Frank E., '02	Physician, Rochester, Minn.
Beebe, Jay L., '98	Physician, Anaheim, Cal.
Carr, George, '99	Druggist, Flandreau
Christianson, Bennett C., '02	Druggist, Volga
Connell, John C., '00	Druggist, Luverne
Cotter, J. C., '96	Farmer, Dell Rapids
Cornell, Edward, '01	Drug Clerk, Huron
Clevenger, J. W., '98	Dentist, Chamberlain
Crowley, D. C., '99	Insurance Agent, Fargo, N. D.
Dillon, Cornelius, '04	Drug Clerk, Sioux Falls
Drew, Arthur W., '03	Druggist, Brookings
Else, Earl, '00	House Physician, Cook County Hospital, Chicago, Ill.
Eckert, Henry, '00	Drug Clerk, Riverside, Cal.
Fjerestad, Carl, '05	Druggist, Elkton
Frick, Harry E., '04	Drug Clerk, Redfield
George, Wm., '00	Physician, Evarts
Goodale, Alton R., '04	Drug Clerk, Aberdeen
Grove, Eugene, '96	Physician, Arlington
Hall, Roy J., '03	Druggist, Oldham
Hayter, McPherson, '02	Druggist, Colman
Hepner, Frank, '99, Assistant Station Chemist U. of Wyoming, Laramie	Physician, Blunt
Hart, Bertrand, '00	Medical Student, Chicago
Heston, Edward C., '03	Druggist, Veblen
Holsey, Joseph, '98	Druggist, Erwin
Hollister, Arthur R., '03	Medical Student, Chicago, Ill.
Hooker, Henry, '04	Drug Clerk, Sioux Falls
Howell, John E., '03	Medical Student, Chicago
Howg, Edwin M., '05	Druggist Henry
Johnston, Samuel E., '03	Druggist, Madison
Jones, Robert, '00	Druggist, Bristol
Jarrett, Arthur A., '02	Druggist, Faulkton
Jarvis, Hall S., '02	Druggist, Brookings
Kendall, Clint D., '99	Orange Grower, Fresno, Cal.
Knox, Wm. H., '95	Student, Brookings
Koch, Arthur E., '04	Drug Clerk, Howard
Larson, Lars P., '05	Druggist, Winfred
Leighty, James A., '02	Drug Clerk, Arlington
Lee, Berton E., '98	Dentist, Brookings
Lentz, Elmer A., '95	Stockman, Midland
Lindsey, Chas., '99	Las Vegas, Nev.
Mathews, Harry E., '05	Druggist, Lane
McCurdy, Walter, '05	Student, S. D. A. C.
Morton, Grant J., '05	Drug Clerk, Sisseton
Morton, Frederic M., '02	Druggist, Sioux Falls
Moore, Thomas, '96	

\*Murphy, Wm., '95

Norton, Frank A., '03, Chemist National Canning Co., Aspinwall, Penn.

Oulton, Frank, '99

Real Estate, Faulkton

Palmer, Horton, '96

Druggist, White

Pickles, Chester E., '02

Druggist, Bradley

Pottinger, George, '05

Drug Clerk, Dell Rapids

Ramsdell, Leonard C., '04

Druggist, Beresford

Schnaidt, Henry, '02

Druggist, Groton

Schroeder, Anna C., '02

Clerk, Howard

Sherwin, Frank, '96

Farmer, Brookings

Shriver, E. M., '99

Druggist, Elkton

Steiner, Frederick W., '03

Medical Student, Baltimore, Md.

Taylor, C. DeWitt, '99

Drug Clerk, Denver, Colo.

Thomas, John C., '02

Drug Clerk, Wakonda

Thompson, Clarence, '05

Farmer, Dell Rapids

Thompson, Godfrey, '04

Medical Student, Philadelphia, Pa.

Tidball, Clyde, '01

Drug Clerk, Brookings

Trumm, Robert E., '03

Druggist, Hazel

Van Dusen, Fred J., '03

Drug Clerk, Lake Preston

Volin, Porter, '05

Drug Clerk, Yankton

Weisflock, Theodore, '04

Drug Clerk, Redfield

West, Hugh H.

Physician, Elgin, Ill.

Whitehead, B. T., '95

Prof. Pharmacy, S. D. A. C.

Williams, Percy, '03

Drug Clerk, Milbank.

Young, Alfred J., '03

Druggist, Oakes, N. D.

\*Deceased

## STUDENT LIST

Abbreviations in the second column are used to designate the lines of work being followed by the students Ag. is the abbreviation used for Agriculture, Ce. for Civil Engineering, Ch Chemistry, Com'l Commercial Science, Ds. Domestic Science, E E Electrical Engineering, G. S General Science. Ho. Horticulture, Ln. Languages, Me. Mechanical Engineering, Mu. Music, Py. Pharmacy.

### GRADUATE STUDENTS.

Culhane, Michael E.,

Com'l,

Brookings.

Holm, Andrew B.,

Py.,

Brookings.

Loucks, Anna Y.,

Mu.,

Altruria.

Mathews, Harry E.,

Com'l,

Brookings.

Miller, Ralph L.,

Ch.,

Brookings.

Norton, Frank A.,

Ln.,

Brookings.

Schaphorst, William F.,

Me.,

Brookings.

Thogerson, Arthur A.,	Com'l,	Brookings.
Westcott, G. R.,	Mu.,	Brookings.
Williams, Harry A.,	Com'l,	Brookings.

## SENIORS.

Aldrich, G. Malcolm,	Ce.,	Brookings.
Barrett, Wylie J.,	E. E.,	Plankinton.
Bonesteel, Bee M.,	G. S.,	Brookings.
Brownell, Ellen A.,	G. S.,	Mellette.
Burghardt, Roy D.,	E. E.,	Valley Springs.
Carpenter, Abbie J.,	Ds.,	Brookings.
Chilcott, Ellery F.,	Ag.,	Brookings.
Coller, Fred A.,	G. S.,	Brookings.
Davies, Gladys,	Py.,	Letcher.
Erstad, Alfred J.,	E. E.,	Brookings.
Evans, Edna V.,	G. S.,	Brookings.
Grace, Oliver J.,	Ag.,	Woonsocket.
Kennard, Frank L.,	Ag.,	Brookings.
Knox, Arthur H.,	Me.,	Alpena.
Koch, Arthur E.,	Py.,	Eureka.
Moffatt, Margaret E.,	Ds.,	Brookings.
Reich, Rose M.,	Ds.,	Tunnel City, Wis.
Thornber, Jessie B.,	Ds.,	Brookings.
Youngburg, Guy E.,	G. S.,	Brookings.

## JUNIORS.

Binnewies, Mabel E. G.,	G. S.,	McCurdy.
Briggs, Stephen F.,	E. E.,	Watertown.
Brownell, D. D.,	Ag.,	Mellette.
Burch, Walter S.,	E. E.,	Howard.
Chalmers, James A.,	G. S.,	Brookings.
Christianson, Christine,	Ds.,	Volga.
Dillman, Arthur C.,	G. S.,	Reville.
Dutcher, R. Adams,	G. S.,	Brookings.
Elliott, Bruce,	E. E.,	Brookings.
Elliott, Ross,	E. E.,	Brookings.
Fjerestad, Alman,	E. E.,	Estelline.
Gagel, Gerald,	G. S.,	Brookings.
Greenly, J. H.,	G. S.,	Brookings.
Hofstetter, George,	Me.,	Mitchell.
Hoover, Homer A.,	G. S.,	Brookings.
Hopkins, R. May,	G. S.,	Brookings.
Kirk, John R.,	Ag.,	Springfield.



Knutson, Mabel A.,	Ds.,	Brookings.
McCordic, Clare,	E. E.,	Groton.
McElmurry, Rilla,	Ds.,	Brookings.
Morton, Grant J.,	Py.,	Toronto.
Reich, Carl J.,	E. E.,	Tunnel City, Wis.
Salmon, Cecil,	Ag.,	Spencer.
Sanderson, Eugene W.,	E. E.,	Brookings.
Tuttle, Volney J.,	E. E.,	Madison.
Underwood, Genevieve,	G. S.,	Brookings.
Westcott, Ruth M.,	G. S.,	Brookings.
Work, Mary L.,	G. S.,	Brookings.

---

**SOPHOMORES.**

Allison, Harold,	Py.,	Brookings.
Alton, Benjamin H.,	Py.,	Brookings.
Avery, Elmer E.,	E. E.,	Austin, Minn.
Beatty, Lois M.,	G. S.,	Brookings.
Bergeim, Olaf,	Py.,	Brookings.
Brown, Chas. H.,	Ag.,	Brookings.
Caldwell, Sarah A.,	G. S.,	Brookings.
Carpenter, Clarence A.,	E. E.,	Sioux Falls.
Chilcott, Ralph W.,	Me.,	Brookings.
Clarke, Roy J.,	E. E.,	Howard.
Drew, Adelbert R.,	G. S.,	Brookings.
Griffith, T. Edwin,	E. E.,	McCook.
Harben, Bartlett L.,	Py.,	Platte.
Holsey, Ernest,	E. E.,	Canton.
Hubbart, Edith J.,	G. S.,	Brookings.
Hyde, Hallie W.,	G. S.,	Brookings.
Johnson, Carl G.,	G. S.,	Hartman.
Kellough, Lewis,	E. E.,	Brookings.
Kelly, Amy,	Ds.,	Brookings.
Kendall, Nellie G.,	G. S.,	Brookings.
Kremer, Henrietta L.,	G. S.,	Brookings.
Ladd, Horace,	Ag.,	Brookings.
Lloyd, Robert E.,	E. E.,	Brookings.
Locke, Chas. A.,	Py.,	Sherman.
Locke, Francis J.,	E. E.,	Castlewood.
McGillivray, Lodiwic,	Me.,	Madison.
Marden, Clarence A.,	Ce.,	Brookings.
Matheny, Chester,	E. E.,	Turton.
Mathews, Oscar,	E. E.,	Brookings.
Mayland, Amy,	G. S.,	Brookings.
Mayland, George R.,	G. S.,	Brookings.
Nelson, Aaron L.,	E. E.,	Ellendale, N. D.

Newton, Samuel R.,	E. E.,	Britton.
Nilsson, Edward,	E. E.,	Gary.
Odland, R. Lewis,	E. E.,	Hurley.
Olberg, Fred C.,	G. S.,	Brookings.
Peirce, Ruth,	G. S.,	Brookings.
Perry, William J.,	G. S.,	Brookings.
Shaw, Robert D.,	Ce.,	Oldham.
Soreng, Edgar M.,	E. E.,	Dexter.
Sperb, John J. H.,	Ce.,	Tyndall.
Ulrich, Darwin W.,	E. E.,	Fountain City, Wis.
Underwood, Beatrice,	Ds.,	Bryant.
Underwood, Loto,	Ds.,	Bryant.
Weeks, Gordon A.,	G. S.,	Yankton.
West, Florence,	G. S.,	Brookings.
West, Frances,	G. S.,	Brookings.
Whitehead, Lindsey,	G. S.,	Brookings.
Williams, Ruby,	G. S.,	Brookings.
Wipf, Michael J.,	Py.,	Freeman.

## FRESHMEN.

Atkinson, Fay,	E. E.,	White.
Bond, William H.,	Ag.,	Alexandria.
Bowles, Fred C.,	E. E.,	Groton.
Brady, Frank A.,	Py.,	Waubay.
Brand, Anna M.,	Ds.,	Big Stone.
Bushnell, Edna J.,	Ds.,	Brookings.
Camp, Fred H.,	E. E.,	Ree Heights.
Catlett, Winifred,	Ds.,	Brookings.
Chladek, Louis F.,	Py.,	Tyndall.
Coburn, Frances W.,	G. S.,	Brookings.
Cole, Jessie,	Ds.,	Brookings.
Cooley, William N.,	Com'l,	Garretson.
Coughlin, Charles,	Com'l,	Carthage.
Coughlin, Joseph H.,	Py.,	Carthage.
Denhart, Cecil,	G. S.,	White.
Dexter, David F.,	Py.,	Centreville.
Erwin, Ada B.,	Ds.,	Brookings.
Estes, Jesse B.,	Com'l,	Beloit, Wis.
Evans, Iva M.,	Ds.,	Brookings.
Flannery, Joseph S.,	Ag.,	Montrose,
Furnstahl, John P.,	Ce.,	Howard.
Gore, Franc M.,	G. S.,	Edwards, N. Y.
Gray, Frank F.,	Py.,	Sioux Falls.
Grudem, John,	G. S.,	Brookings.
Haas, Bertha,	Com'l,	Arlington.

Hall, Ray W.,	Com'l,	Mound City.
Hanson, Samuel J.,	G. S.,	Brookings.
Hoch, Joseph L.,	Py.,	Elkton.
Hoel, Rudolph,	E. E.,	Canby, Minn.
Hughes, John L.,	Ce.,	Tyndall.
Hyde, Owen R.,	G. S.,	Brookings.
Jones, Robert D.,	G. S.,	Revillo.
Kartrude, Inga M.,	Py.,	Hardwick, Minn.
Kremer, Alvin V.,	G. S.,	Brookings.
Ladd, Amy,	Ds.,	Brookings.
Lawshe, Ben B.,	Com'l,	Brookings.
McKeown, Ralph,	E. E.,	Elkton.
Marquis, Sydney,	Ce.,	Clear Lake.
Millman, Lora A.,	Com'l,	Clark.
Moffatt, Gladys,	Ds.,	Brookings.
Morrison, Guy E.,	Ag.,	Top Bar.
Oliver, Robert B.,	Com'l,	Madison.
Palm, Ellen A.,	Ds.,	Castlewood.
Parry, Hiram G.,	Ce.,	Victor, Col.
Peterson, Ora D.,	Ds.,	Brookings.
Phillips, George C.,	Me.,	Webster.
Potter, Clarence,	Com'l,	Selby.
Price, Samuel G.,	G. S.,	Rapid City.
Quiggle, Ernest,	Py.,	Groton.
Roney, Ray W.,	Py.,	Sioux Falls.
Sanborn, Harvey W.,	Ce.,	Clear Lake.
Sarvis, John T.,	G. S.,	Brookings.
Serles, Raymond R.,	Py.,	Salem.
Sexauer, Elmer,	Com'l,	Brookings.
Sperb, Frank,	Ce.,	Tyndall.
Stonefield, Pearl A.,	Py.,	Oldham.
Stromme, Joseph L.,	Me.,	Volga.
Swering, Joe B.,	E. E.,	Brookings.
Tubbs, George W.,	Ag.,	Custer.
Twiss, Robert,	E. E.,	Athol.
Vernlund, Carl,	Ag.,	Astoria.
Wandell, Valdina,	Ds.,	Colman.
Watson, Robert S.,	Ce.,	Mitchell.
Welker, V. E.,	E. E.,	Redfield.
White, Orland E.,	Ho.,	Delmont.
Williams, Losey J.,	Py.,	Watertown.
Wilson, Frank M.,	Py.,	Brookings.
Wright, Mary M.,	G. S.,	DeSmet.
Yocum, Frank W.,	E. E.,	Parker.

## SUB-FRESHMEN.

Anderson, A. A.,	Hitchcock.
Bacon, Eva F.,	Brookings.
Baker, Clara M.,	Magnolia, Minn.
Bartholow, Rozina,	Reliance.
Berg, Bernard,	Stockholm.
Bonzer, Frank L.,	Evarts.
Brady, Chas. E.,	Herreid.
Bryant, Glenn A.,	Andover.
Buechholz, Carl G.,	Estelline.
Cassidy, W. T.,	Elkton.
Clark, Ralph S.,	Langford.
Coakley, Manning,	Flandreau.
Crothers, Harold M.,	Brookings.
Crothers, Ralph L.,	Brookings.
Culhane, William G.,	Elkton.
Davis, Hazel J.,	Brookings.
Devan, Charles H.,	Pollock.
Dinsmore, Nellie W.,	Clark.
Engen, Alfred C.,	Canton.
Eustace, E. H.,	Brookings.
Fickle, Walter L.,	Blunt.
Fridley, Leonard J.,	Turton.
Fridley, J. Ray,	Turton.
Geelan, Guy E.,	Montrose.
Gerth, Herman F.,	Estelline.
Gilechrist, James B.,	Watertown.
Grotta, Edwin B.,	Esmond.
Gunnison, George I.,	Bancroft.
Gunnison, Leslie L.,	Bancroft.
Gutcher, Arthur D.,	Sioux City, Iowa.
Hall, Mabelle D.,	Brookings.
Handwerk, Catherine	Bruce.
Heltibridge, Ralph,	Miller.
Hesnard, Edward L.,	Hermosa.
Hively, Elmer,	Egan.
Holleman, James,	Springfield.
Hollmann, Frederick B.,	Hooker.
Hunt, Ellis E.,	Devoe.
Johnson, Carl E.,	Langford.
Johnson, Elizabeth,	Erwin.
Johnson, Esther B.,	Brookings.
Johnson, Herman O.,	Irene.
Johnson, Oscar H.,	Brookings.
Keller, Flora,	Manchester.
Keller, Ruby B.,	Manchester.



Ladd, William S.,	Brookings.
Lampson, Bert,	Colman.
Lampson, Laura M.,	Colman.
Landon, Florence,	Bryant.
Larsen, Amanda,	Geddes.
Lohr, Howard C.,	Estelline.
Loucks, Daniel K.,	Altruria.
McDonnell, Joseph,	Hartman.
Malum, E. E.,	Chicago, Ill.
Mara, Hubert W.,	Troy.
Marske, Albert,	Andover.
Matheny, Alice,	Turton.
Matheny, Fred C.,	Conde.
Mathews, Arthur,	Brookings.
Mathewson, Lynn L.,	Tripp.
Miner, Ada,	Sheffield, Iowa.
Morrison, Joseph D.,	Top Bar.
Morrison, Philister,	Springfield.
Murphy, James P.,	Montrose.
Nicholson, Lida M.,	Brookings.
North, Sterling E.,	Hitchcock.
Ort, Albert A.,	Verdi, Minn.
Orth, Ruby,	Elkton.
Palm, Andrew W.,	Castlewood.
Palm, Hannah,	Castlewood.
Paul, Winnie,	Brookings.
Perry, Jennie,	Brookings.
Plocker, Florence M.,	Brookings.
Poage, Alonzo A.,	Bancroft.
Regan, Jeremiah E.,	Yale.
Reinecke, Fred A.,	Athol.
Rice, Ethel L.,	Park Rapids, Minn.
Rilling, Ben G.,	Brookings.
Schultz, Ida,	Aurora.
Sharp, Edwin C.,	Bristol.
Sloan, Roy,	Brookings.
Stark, Henry A.,	Canova.
Swackerson, Carl A.,	Oregon, Ill.
Thompson, Elnora,	Erwin.
Thompson, Ole,	Baltic.
Thornber, Harvey T.,	Brookings.
Throop, Lotta M.,	Brookings.
Toy, Victor E.,	Andover.
Trask, Walter S.,	Blunt.
Tyler, John E.,	Hartford.
VanDegrift, Will,	Egan.

Vetterhus, Ove,	Garretson.
Walker, Francis L.,	Carthage.
Whitmus, John A.,	Brookings.
Williams, Arthur R.,	Langford.
Williams, R. Glen,	Langford.
Williams, Harry G.,	Brookings.
Williamson, Charles,	Tyndall.
Williamson, Frank R.,	Artesian.
Wohlheter, Walter P.,	White.
Wohlheter, Vernie G.,	White.
Young, George W.,	Hitchcock.

## PREPARATORY STUDENTS.

Alrick, Thea,	Brookings.
Amundson, Lulu,	Estelline.
Amundson, Mabel,	Estelline.
Anderson, Ida L.,	Adrian, Minn.
Andrews, Alice E.,	Erwin.
Andrews, Byron,	Erwin.
Bem, Robert O.,	Olivet.
Benson, Albert L.,	Parker.
Berg, Ellen A.,	Stockholm.
Bloom, John M.,	Parker.
Boersma, Josie,	Clear Lake.
Bowles, Sadie J.,	Groton.
Branch, Ira,	Hecla.
Brooks, William S.,	Mansfield.
Buck, Ervin R.,	Frankfort.
Carlson, C. Oscar,	Carpenter.
Chambers, Glenn W.,	Carpenter.
Croes, Charles W.,	Wessington.
Crosby, Exa E.,	Platte.
Dahl, Josie M.,	Flandreau.
Dahl, Palmer T.,	Flandreau.
Dalgaard, Osvin L.,	Beresford.
Determan, Albert,	Marion Junction.
DeVaney, Paul Grover,	Dell Rapids.
Digre, Marie,	Hendricks, Minn.
Dokken, Oscar,	Astoria.
Durland, Ben E.,	Brookings.
Else, Pearl C.,	Doland.
Evenson, Eddie,	Lily.
Finch, Cleve R.,	Huron.
Finley, P. Vollmar,	Miller.
Fish, George D.,	Bruce.

Fox, Merle,	Brookings.
Fridley, Richard C.,	Turton.
Giffen, W. H.,	Central City, Iowa.
Gray, Boyd,	Vilas.
Halls, Arthur,	Hills, Minn.
Hallstrom, Albert,	Webster.
Halverson, Josie,	Bancroft.
Hamilton, Wilford R.,	Olivet.
Hansen, Christian,	Forestburg.
Hanson, Jennie,	Viborg.
Hartwick, Gailien C.,	Brookings.
Hastings, J. Clare,	Andover.
Heald, Homer S.,	Letcher.
Hill, Charles W.,	Sioux Falls.
Holden, Neta,	Watertown.
Hoy, Harry A.,	LaDelle.
Hurlbert, Clark,	Raymond.
Jacobson, John M.,	Baltic.
Jerlow, Morris,	St. Mary's.
Johnson, Clifford D.,	Broadland.
Johnson, Ella C.,	Lake Preston.
Johnson, Ernest D.,	Beresford.
Johnson, Harry C.,	Carthage.
Johnson, Ida,	Arlington.
Keland, Olaf,	Brookings.
Kellett, Estella,	Seneca.
Kellett, Lawrence E.,	Seneca.
Kelsey, A. C.,	Fedora.
Kilpatrick, Andrew V.,	Houghton.
Kleinsasser, Jacob J.,	Huron.
Knutson, Theodore,	Brookings.
LaMont, Leon E.,	Willow Lakes.
Larson, Dinah,	Viborg.
Larson, Emma B.,	Flandreau.
Lawrence, Ethel,	Doland.
Lockhart, John G.,	Brookings.
Lofstedt, Theresa,	Arlington.
Lunn, Chas. B.,	Kimball.
Lunn, James W.,	Kimball.
McCullough, Wesley H.,	Iroquois.
Marquardt, Elizabeth,	Wentworth.
Mayland, Guy,	Brookings.
Mead, Earl E.,	Redwood Falls, Minn.
Moe, Peter O.,	Renner.
Morrison, Edna,	South Shore.
Olsen, Otto G.,	Canton.

Onstine, Wendall L.,	Flandreau.
Orth, Oliver S.,	Elkton.
Overseth, James,	Canton.
Patterson, John V.,	Wentworth.
Pemberthy, James,	Brookings.
Peterson, Emmet,	Fedora.
Pickles, James E.,	Clark.
Price, Donald G.,	Effington.
Reeves, Ellen,	Volga.
Rohweder, Adolph,	Goodwin.
Romsdahl, Conrad M.,	Arlington.
Root, Clara,	Britton.
Rude, Edmund,	Arlington.
Ruste, Christopher,	Ramsey.
Rydjord, Lewis,	Lily.
Satter, Alvin,	Carthage.
Savold, Elmer L.,	Hills, Minn.
Sayre, John M.,	Bendare.
Schauer, Paul E.,	Garretson.
Schoenwether, Alice,	Lake Preston.
Schurmann, Lewis F.,	Waverly.
Shinnick, Grace,	Waverly.
Shinnick, J. W.,	Waverly.
Sills, Arthur A.,	Lesterville.
Simmons, Edward E.,	Brookings.
Simonson, Carl J.,	Estelline.
Simonson, Stanley O.,	Estelline.
Smith, Lewis,	Gayville.
Smith, Newell D.,	Lake Andes.
Smith, Thomas W.,	Garretson.
Spilde, Ole,	Hetland.
Stewart, Pearl J.,	Selby.
Stokes, Max G.,	Britton.
Stowman, Ross E.,	Hitchcock.
Strand, Thomas O.,	Harrold.
Struif, Joseph F.,	Miller.
Sutherland, Watson C.,	Aurora.
Sveen, Louise M.,	Brookings.
Swenehart, John H., Jr.,	Vandervoort.
Thayer, Carl G.,	Brookings.
Thomsen, T. A.,	Ethan.
Thorstenson, Henry,	Selby.
Trumm, Josh.,	Hayti.
VanOsdel, Ben G.,	Mission Hill.
Walder, Eva E.,	Colman.
Weiland, Joe,	Marion Junction.



Weston, Frank C.,	Letcher.
Westrum, Alfred,	Volga.
Wilcox, Vincent D.,	Aurora.
Zeller, Leonard F.,	Groton.
Zierick, Elmer E.,	Westover.

#### SHORT COURSE IN ENGINEERING.

Akvik, John C.,	Boyd, Minn.
Axlund, Martin,	Alsen.
Bartels, Charley H.,	Elma, Iowa.
Berg, Alfred,	Garretson.
Brende, Thomas O.,	Garretson.
Bryant, Frank,	Garden City.
Buntrock, Chester,	Madison.
Christianson, Christian	Flandreau.
Clark, John H.,	Castlewood.
Clark, Maitland,	Castlewood.
Detjen, Arthur C.,	Lennox.
Eggen, John G.,	Hendricks, Minn.
Erickson, Henry,	Brookings.
Esche, William H.,	Bath.
Farnham, Clint O.,	Arlington.
Ferguson, Clarence K.,	Pioneer.
Fossum, Andrew O.,	Canton.
Gill, John B.,	Milbank.
Haden, Lawrence L.,	Toronto.
Harris, Ralph L.,	Delmont.
Hedges, Edgar,	Sidney, Neb.
Hempel, Lawrence F.,	Hendricks, Minn.
Herbert, Harry,	Flandreau.
Herbert, William,	Flandreau.
Hinseth, Albert,	Volin.
Hoefs, Roy E.,	Selby.
Hugaas, Peter B.,	Hetland.
Hutchinson, Carlisle,	Conde.
Jackson, Edwin, A.,	Lonsbury.
Jewett, Ernest,	Wessington.
Juttlestad, Louis M.,	Volin.
Kaiser, Mathias,	Hoven.
Kimball, Roy E.,	Miranda.
Labbit, Neil,	Vilas.
Langhinricks, Michael,	Ottawa, Indian Territory.
Lenz, Raymond,	Conde.
Lerew, Isaac W.,	Miranda.
Lynch, C. Francis,	Elkton.

McIntire, Lewis,	East Sioux Falls.
McCoy, Walter M.,	Huron.
Miller, Henry G., Jr.,	Garden City.
Morrison, Clarence,	South Shore.
Nelson, Albert H.,	White Lake.
Odland, Ole M.,	Parker.
Olson, Edward,	Selby.
Otis, Loyd L.,	Yankton.
Ramlo, Julius,	Henricks, Minn.
Redmon, J. C.,	Beresford.
Robbnnolt, Jessé,	Delmont.
Rossbach, Henry,	Lisbon, N. D.
Rusch, Charley,	Osceola.
Schlaefli, Ben, Jr.,	Yankton.
Schroeder, Henry,	Lidgerwood, N. D.
Schutt, George,	Redfield.
Scott, Alben,	Henry.
Scott, Will,	Henry.
Sipes, Vernon G.,	Tripp.
Slagle, Lee E.,	Spencer.
Sorensen, Peter,	Lake Benton, Minn.
Strande, Emil L.,	Lake Preston.
Teigen, Edward A.,	One Road.
Vandenbos, D. C.,	Harrison.
Wieting, Edgar O.,	Hitchcock.
Willison, Walter D.,	Brookings.
Wolverton, J. B.,	Campbell.

---

#### SHORT COURSE IN DOMESTIC SCIENCE.

Bloom, Bertha,	Parker.
Hoxeng, Anna,	Volin.
Hoxeng, Marie,	Volin.
Jenson, Amanda,	Viborg.
Larson, Bertha,	Langford.
Larson, Lydia L.,	Viborg.
Peterson, Cecilia,	Viborg.
Peterson, Clara,	Viborg.
Peterson, Florence,	Astoria.
Strande, Amanda,	Lake Preston.
Strande, Ida,	Lake Preston.
Talbot, Amy B.,	Gayville.

---

#### SHORT COURSE IN DAIRY SCIENCE.

Downer, Julius Z.,	Roscoe.
--------------------	---------

Gray, Frank F.,	Sioux Falls.
McGillivray, Thomas J.,	Madison.
Mylre, Peter N.,	Hartman.
Sheelar, Edward W.,	Webster.
Steffen, Chas. F.,	Milwaukee, Wis.

---

#### SPECIAL STUDENTS.

Bacon, Ernest V.,	Brookings.
Blakely, Herbert,	Brookings.
Burt, David R.,	South Shore.
Erickson, Birdie,	Brookings.
Foote, Jennie,	Athens, Mich.
Goltz, Emma,	Balaton, Minn.
Gullick, Cora R.,	Brookings.
Hess, Mary E.,	Estelline.
Hoover, Nellie I.,	Brookings.
Hyde, Winnifred R.,	Brookings.
Kelly, Jerry E.,	Watertown.
Larson, Mrs. Grace,	Brookings.
Larson, John J.,	Irene.
Olander, Mrs. J. F.,	Brookings.
Tyson, Pearl E.,	Brookings.
Yanke, Edith L.,	Brookings.

---

#### SIX WEEKS AGRICULTURE.

Anderson, A. H.,	Brandt.
Banse, Herman,	Wolsey.
Behrens, William,	Rapid City.
Bernhart, Kasten,	Humboldt.
Bingham, Perry C.,	Redfield.
Briggs, C. D.,	Cornell.
Budahl, John,	Toronto.
Budahl, Peter,	Astoria.
Christensen, Grover C.,	Beresford.
Converse, R. L.,	Brookings.
Crouch, A. C.,	Artesian.
Dawes, G. P.,	Aberdeen.
Drey, Milo L.,	Beresford.
Ellefson, Oscar,	Wakonda.
Eustace, Earl H.,	Brookings.
Fuller, C. R.,	Cavour.
Hastings, Frank L.,	Andover.
Hansen, Chris,	Forestburg.
Hilkemeier, Henry E.,	Frankfort.

Jenney, L. E.,	Belmont.
Johnson, Herman A.,	Hudson.
Jones, John W.,	Mitchell.
Kelsey, Arthur C.,	Fedora.
Knutson, Bert O.,	Lake Preston.
Larson, Knute J.,	Langford.
Leikvold, P.,	Wakonda.
Mathiesen, E. L.,	Watertown.
Morser, R. W.,	Clark.
Odland, N. O.,	Kidder.
Oneal, Harry,	Fedora.
Peterson, E. H.,	Fedora.
Peterson, Oscar C.,	Astoria.
Potter, A. Howard,	Andover.
Putnam, R. E.,	Artesian.
Romereim, A. C.,	Hankinson, N. D.
Romereim, H. N.,	Hankinson, N. D.
Ruste, C.,	Ramsey.
Schreiber, William,	Potter.
Smith, W. A.,	Lake Andes.
Sornsen, Anton P.,	Beresford.
Sorensen, James,	Erwin.
Thormodsgard, Oluf,	Moe.
Thorstenson, Henry	Selby.

## MUSIC STUDENTS.

Aldrich, G. Malcolm,	Voice,	Brookings.
Alton, Lila,	Voice,	Brookings.
Anderson, Ida,	Piano,	Adrian, Minn.
Anderson, Edith,	Piano,	Ashton.
Anderson, Inga,	Piano,	Carthage.
Andrews, Alice,	Piano,	Erwin.
Atkinson, Fay,	Cornet,	White.
Bacon, Eva,	Voice,	Brookings.
Banse, Herman,	Voice,	Woolsey.
Bartholow, Rozina,	Piano,	Reliance.
Behrens, William,	Violin,	Rapid City.
Benson, Gertrude,	Piano,	Parker.
Berg, Ellen A.,	Piano,	Stockholm.
Bloom, Bertha,	Piano,	Parker.
Boersma, Josie,	Piano,	Clear Lake.
Bonine, Hulda,	Piano,	Pipestone, Minn.
Bonine, Louise,	Piano,	Pipestone, Minn.
Bowles, Sadie,	Piano,	Groton.
Branch, Ira,	Cornet,	Hecla.



Brownell, Ellen A.,	Voice,	Mellette.
Catlett, Winifred,	Voice,	Brookings.
Chalmers, Elizabeth,	Piano,	Brookings.
Chalmers, Wallace,	Piano,	Brookings.
Clarke, Blanche,	Piano,	Brookings.
Cole, Jessie,	Voice,	Brookings.
Crothers, Harold M.,	Voice,	Brookings.
Crouch, Winnie,	Piano,	Artesian
Dahl, Josie,	Piano,	Flandreau.
Danburg, Deverne,	Violin,	Miller.
DeVaney, Grover,	Piano,	Dell Rapids.
Dillon, Claude H.,	Violin,	Brookings.
Dull, Minnie,	Piano,	Brookings.
Else, Pearl C.,	Voice, Piano,	Doland.
Erwin, Ada B.,	Piano,	Brookings.
Estes, Jesse B.,	Voice,	Beloit, Wis.
Fjerestad, Anna A.,	Piano,	Estelline.
Foote, Jennie,	Piano,	Athens, Mich.
Fridley, Leonard J.,	Violin,	Turton.
Goltz, Emma,	Piano,	Balaton, Minn.
Grant, Edna A.,	Piano,	Clark.
Gray, Boyd,	Violin,	Vilas.
Hanson, Jennie,	Piano,	Viborg.
Harben, Bartlett L.,	Voice,	Platte.
Harza, Mable C.,	Piano,	Brookings.
Hesnard, Edw. L.,	Violin,	Hermosa.
Holden, Neta,	Piano,	Watertown.
Hoxeng, Anna,	Piano.	Volin.
Jerlow, Morris,	Violin,	St. Mary's.
Johnson, Carl G.,	Violin.	Hartman.
Johnson, Elizabeth,	Piano.	Erwin
Johnson, Mary A.,	Voice, Piano,	Brookings.
Kellough, Mrs. Lewis,	Piano.	Brookings.
Kendall, Nellie G.,	Voice,	Brookings.
Kimball, Roy E.,	Cornet,	Miranda.
Larson, Bertha,	Voice,	Langford.
Larson, Emma B.,	Piano.	Flandreau.
Lawrence, Ethel.	Piano,	Doland.
Leekley, Elsie P.,	Voice, Violin,	Brookings.
Loucks, Anna Y.,	Piano,	Altruria.
McElmurry, Rilla,	Voice, Violin,	Brookings.
Mayland, Guy,	Cornet.	Brookings.
Miner, Ada,	Piano,	Sheffield, Iowa.
Morrison, Edna,	Piano,	South Shore.
Morser, R. W.,	Violin.	Clark.
Nicholson, Lida M.,	Voice.	Brookings.

Orth, Ruby,	Piano,	Elkton.
Paul, Winnie,	Piano,	Brookings.
Peirce, Ruth,	Piano.	Brookings.
Plocker, Florence M.,	Piano.	Brookings.
Prange, Elizabeth,	Piano,	Bemis.
Quiggle, Ernest,	Cornet,	Groton.
Rice, Ethel L.,	Piano,	Park Rapids, Minn.
Root, Clara,	Violin,	Britton.
Salmonson, Selma,	Piano.	Arlington.
Satter, Alvin,	Violin,	Carthage.
Schauer, Amy,	Piano,	Garretson.
Schoenwether, Alice,	Piano,	Lake Preston.
Schultz, Ida,	Piano,	Aurora.
Smith, Allan E.,	Violin, Cornet,	St. Lawrence.
Smith, Lewis,	Violin,	Gayville.
Smith, Tillie,	Voice, Piano,	Gayville.
Sperb, Frank,	Violin,	Tyndall.
Stokes, Max G.,	Voice, Piano,	Britton.
Strande, Amanda,	Piano,	Lake Preston.
Strande, Ida,	Piano,	Lake Preston.
Talbot, Amy B.,	Piano,	Gayville.
Taskila, Mary,	Piano,	Arlington.
Throop, Lotta M.,	Piano,	Brookings.
Toy, Victor E.,	Cornet,	Andover.
Tubbs, George W.,	Cornet,	Custer.
West, Frances,	Voice,	Brookings.
Westcott, G. R.,	Voice,	Brookings.
Wheeler, Mrs. W. A.,	Voice,	Brookings.
Whitehead, Lindsey W.,	Voice,	Brookings.
Williams, Harry G.,	Cornet,	Brookings.
Williamson, Frank R.,	Cornet,	Artesian.
Wohlheter, Walter P.,	Cornet,	White.
Youngburg, Mamie V.,	Piano,	Brookings.
Zeller, Leonard F.,	Piano,	Groton.
Zieckrick, Elmer E.,	Piano,	Westover.

### SUMMARY.

---

Graduate Students	10
Seniors	19
Juniors	28
Sophomores	50
Freshmen	69
Sub-Freshmen	102
Preparatory	129
Short Course in Steam Engineering	65
Short Course in Domestic Science	12
Short Course in Dairy Science	6
Special Students	16
Six Weeks' Course in Agriculture	43
Music Students	100
<hr/>	
Total	649
Names repeated	78
<hr/>	
Net Total	571

# INDEX

Abbreviations .....	25	Domestic Science, Short Course .....	85
Adams Act .....	13	Dormitories.....	17
Admission, Conditions of.....	36	Drawing for Public School.....	69
Agricultural Engineering.....	56	Drug Assaying.....	122
Agriculture.....45, 49, 50,	61	Dynamo Design.....	127
Alternating Currents.....	127	Dynamo Electric Machinery...	127
Alumni .....	137, 146	Economics .....	79, 91
Alumni Association.....	137	Electives.....	44
Amanuensis Course.....	78	Electrical Engineering.....55,	122
American Institutions.....	91	Electric Light and Power Dis-	
Analytic Mechanics.....	101	tribution.....	127
Anatomical Methods.....	132	Elocution .....	117
Architectural Drawing and De-		Employees.....	8
sign .....	105	Engineering Design.....	105
Animal Husbandry.....45,	61	Engineering Physics.....	129
Art.....	67	English.....85,	129
Art History.....	69	Entertainments.....	31
Astronomy.....99,	102	Entomology.....	71
Athletics.....31,	35	Entrance Conditions .....	36
Athletic Grounds.....	17	Equipment.....	15
Attendance.....	39	Establishment and Purpose....	10
Bacteriology .....	132	Euterpe Society.....115,	135
Band.....	116	Ethics.....	119
Bookkeeping .....	129, 130	Examination for Entrance....	36
Botany.....	69	Excuses.....	39
Breeds of Live Stock.....	61, 63	Expenses, Students.....	26
Buildings.....	15	Experiment Station.....7, 13,	60
Business Course.....	80	Fabrics.....	83
Business Practice .....	80	Faculty.....4,	23
Butter Makers Course.....	64	Farm.....	17
Calendar .....	3	Farm Crops.....	63
Calculus.....	101	Farm Mechanics.....	64
Campus.....	15	Floriculture.....	95
Carpentry.....	103	Foods .....	83
Chapel Exercises.....	31	Forestry.....92,	94
Cheese Making.....63,	65	Forging.....	103
Chemistry.....	73	Free Hand Drawing.....	67
Christian Associations.....33,	34	French.....	97
Civil Engineering.....56,	75	Freshmen.....	149
Collegian Staff and Organiza-		Gas Engines.....	107
tion.....	35	General Science Course.....	53
Commerce.....	79	German.....	96
Commercial Arithmetic.....	80	Geology.....	89
Commercial Science.....	77	Grades.....	38
Committees, Faculty.....	6	Gymnasium.....	17
Conditioned Students.....	39	Handicraft .....	69
Conduct, Student.....	26	Hatch Act.....13,	60
Cooking.....	85	Heat.....	125
Courses Defined.....	38	Heating .....	21
Dairying.....47, 61, 63,	67	History.....90, 91,	129
Degrees.....	40	History of Education.....	119
Departments of Study.....	23	Home Gardening.....	95
Department.....	42	Horseshoeing.....	133
Design of Power Stations.....	127	Horticulture .....	42, 51, 92
Dietetics.....	85	Household Economy.....	83
Domestic Science.....52,	81		



Household Sanitation.....	83	Post Graduates.....	146
Hydraulics.....	77	Preparatory Department.....	129
Hygiene.....	83	Preparatory Students.....	153
Income, Sources of.....	12	Psychology.....	119
Irrigation Engineering.....	77	Publications, Student.....	35
Juniors.....	147	Railway Engineering.....	77
Laboratories.....	17	Regents.....	6, 21
Labor, Student.....	29	Registration, Method of.....	38
Landscape Gardening.....	95	Required Exercises.....	25
Languages.....	95, 118	Rhetoric.....	87
Latin.....	118	Road Construction.....	77
Law.....	78, 79, 91	Sanitary Conditions.....	21
Lecture and Class Rooms.....	19	Schedules of Courses.....	49, 58
Library.....	19	Schemes of Study.....	42
Light.....	127	Scholarships.....	29
Lighting.....	21	Seniors.....	147
Literature.....	85	Sewerage Engineering.....	77
Literary Societies.....	32, 134	Sewing.....	81
Living Arrangements of Students.....	26, 28	Short Courses.....	3, 64, 67, 85, 109
Location of College.....	12	Shorthand.....	78
Machine Shop.....	105	Sociology.....	92
Majors and Minors.....	44	Soil Physics.....	63
Materia Medica.....	122	Sophomores.....	148
Mathematics.....	96	Sound.....	127
Mechanical Drawing.....	105	Special Courses.....	42, 64, 65
Mechanical Engineering.....	54, 102	Special Students.....	36, 158
Mechanism, Elements of.....	105	Steam Boilers.....	107
Methods of Teaching.....	119	Steam Engineering.....	107
Military.....	25, 31, 47, 109, 135	Steam Engine.....	105
Money and Banking.....	92	Stock Breeding.....	63
Morrill Act.....	12	Stock Feeding.....	63
Municipal Government.....	91	Stock Judging.....	61
Museums.....	19	Strength of Materials.....	107
Music.....	113	Student Affairs.....	25
Mycology.....	71	Student List.....	146
Nursery Handicraft.....	95	Study Room.....	19
Nursing and Invalid Cookery.....	83	Sub Freshman Course.....	130
Oratorical Association.....	35, 134	Sub Freshmen.....	151
Organizations, Student.....	32, 134	Taxonomy.....	71
Painting, Oil.....	69	Teacher's Course.....	58
Pedagogy.....	117	Terms and Vacations.....	3, 28
Pharmacognosy.....	71	Time to Enter.....	26
Pharmacy.....	57, 119	Tuition.....	28
Pharmacy Graduates.....	144	Tutoring.....	26, 40
Physical Culture.....	31, 117	Tutors.....	8
Physical Geography.....	130	Typewriting.....	78
Physics.....	122, 131	Veterinary.....	47
Physiology.....	130, 132	Veterinary Anatomy.....	132
Piano Music.....	114	Veterinary Medicine.....	133
Policy of the College.....	13	Violin Music.....	115
Pomology.....	94	Vocal Music.....	115
Political Science.....	90	Voice Culture.....	114
Postal Facilities.....	21	Water Supply Engineering.....	77
		Wood Turning.....	103
		Zoology.....	131





37dH  
6-07

THE  
SOUTH DAKOTA  
AGRICULTURAL  
COLLEGE

ANNUAL CATALOGUE

1906-1907





SOUTH DAKOTA

# AGRICULTURAL COLLEGE

ANNUAL CATALOGUE

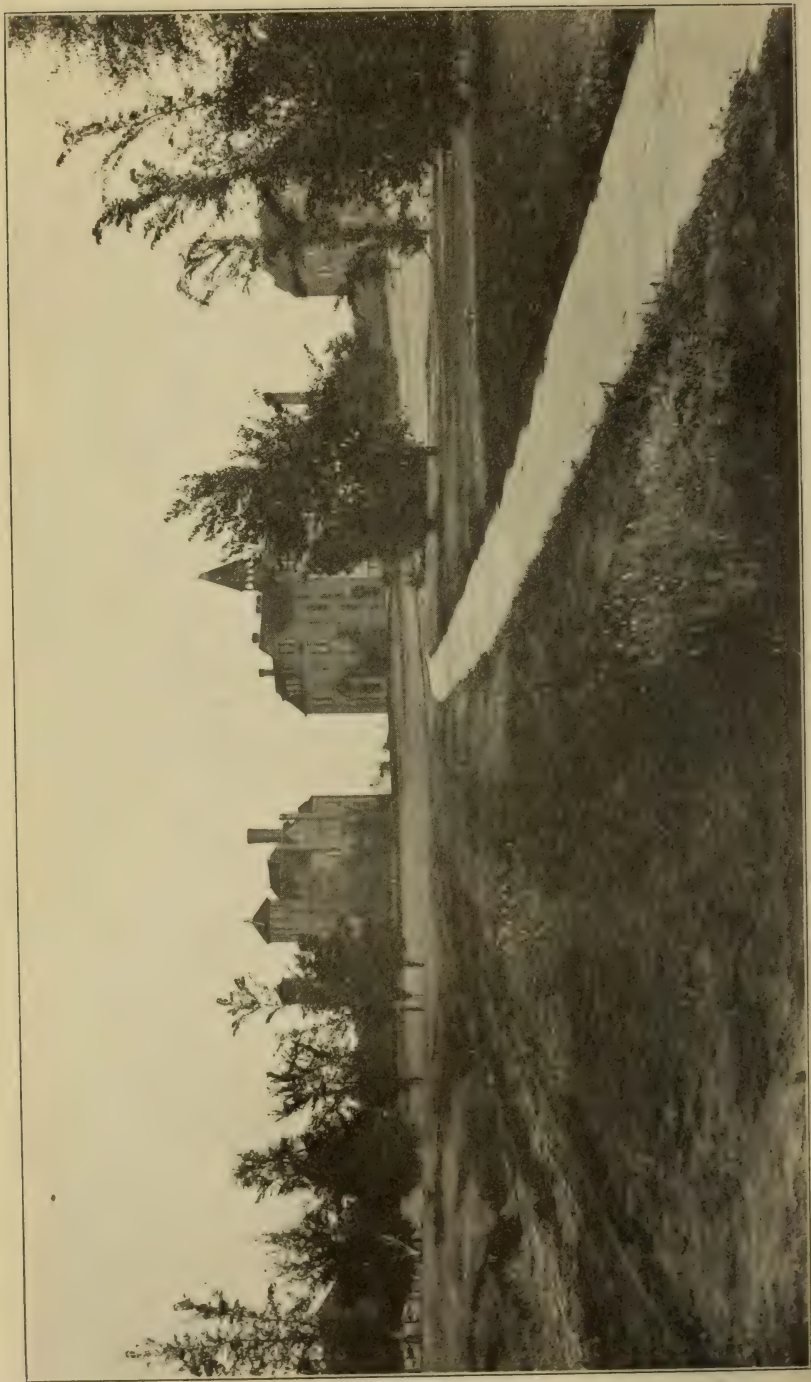
1906-1907

---

WITH ANNOUNCEMENTS OF THE SOUTH DAKOTA STATE  
COLLEGE OF AGRICULTURE AND MECHANIC  
ARTS FOR 1907-1908

---

PUBLISHED BY THE COLLEGE  
BROOKINGS, SOUTH DAKOTA  
1907



*Chapel, Central and Experiment Station Buildings.*

## CALENDAR FOR 1907-8

---

1907.

### FIRST SEMESTER.

September 16-17—Entrance examinations and registration.

September 18—Work of first Semester begins.

September 27—Faculty reception to students.

November 1—Last day for announcing subjects of theses.

November 28-29—Thanksgiving recess.

December 20—Christmas vacation begins at noon.

1908.

January 6—Christmas vacation ends at 8:00 a. m.

January 6—Short courses in agriculture begin.

January 27-31—Examination week.

January 31—First Semester ends.

### SECOND SEMESTER.

February 3—Second Semester begins.

April 6 to 10—Spring vacation.

May 25—Senior vacation begins.

June 1 to 5—Examination week.

June 7—Baccalaureate sermon.

June 10—Commencement exercises at 10:30 a. m.

---

## CALENDAR OF SHORT COURSES IN 1908

January 6 to February 14—Short course in Agriculture.

January 6 to January 17—Short course in Poultry Husbandry.

January 6 to April 6—Short course in Dairy Science.

January 6 to April 6—Short course in Home Economics.

January 6 to April 6—Short course in Horticulture.

January 6 to June 10—Practical Steam Engineering.



## FACULTY

---

ROBERT LINCOLN SLAGLE, A. M., Ph. D., President.

A. B., Lafayette College, 1887; A. M., Lafayette College, 1890; Ph. D., Johns Hopkins University, 1894; Assistant to Professor W. O. Atwater in food investigation, Middletown, Connecticut, and New York City, 1894-1895; Professor of Chemistry, South Dakota Agricultural College, 1895-1897; President and Professor of Chemistry, South Dakota School of Mines, 1897-1905; President South Dakota Agricultural College since January 1, 1906.

HUBERT BERTON MATHEWS, M. S., Professor of Physics and Electrical Engineering.

B. S., South Dakota Agricultural College, 1892; M. S., South Dakota Agricultural College, 1899; Superintendent of City Schools, Clark, S. D., 1892-1893; Assistant in Chemistry and Physics, South Dakota Agricultural College, 1893-1896; Professor of Physics, 1896-1899; Professor of Physics and Electrical Engineering since 1899.

JAMES HENRY SHEPARD, B. S., Professor of Chemistry.

B. S., University of Michigan, 1875; Student in post-graduate University of Michigan, 1881-1882; Instructor in Natural Sciences, Ypsilanti, Michigan, High School, 1882-1888; Professor of Chemistry, South Dakota Agricultural College, since 1888.

HALVOR CHRISTIAN SOLBERG, M. E., Professor of Mechanical and Steam Engineering.

B. S., South Dakota Agricultural College, 1891; B. M. E., Purdue University, 1895; M. E., Purdue University, 1896; Professor of Practical Mechanics, South Dakota Agricultural College, 1891-1896; Professor of Mechanical and Steam Engineering since 1896.

BOWER THOMAS WHITEHEAD, M. S., Ph. C., Professor of Pharmacy.

Ph. G., South Dakota Agricultural College, 1895; Ph. C., Northwestern University, 1896; B. S., South Dakota Agricultural College, 1897; M. S., South Dakota Agricultural College, 1901; Professor of Pharmacy in South Dakota Agricultural College since 1896.

NIELS EBBESEN HANSEN, M. S., Professor of Horticulture and Forestry.

B. S., Iowa Agricultural College, 1887; M. S., Iowa Agricultural College, 1894; Commercial Iowa Nurseries, Atlantic and Des Moines, 1888-1891; Assistant Professor of Horticulture, Iowa Agricultural College, 1891-1895; Agricultural Explorer for U. S. Department of Agriculture to Europe and Asia, 1897-1898, 1906-1907; Professor of Horticulture in South Dakota Agricultural College since 1895.

GEORGE LINCOLN BROWN, Ph. D., Professor of Mathematics and Astronomy.

B. S., University of Missouri, 1892; Teaching Fellow in Mathematics, 1892-1893; M. S., 1893; Fellow in Mathematics, University of Chicago, 1894-1896; Ph. D., University of Chicago, 1900; Professor of Mathematics, South Dakota Agricultural College, since 1896.

**EDWARD LOCKHART MOORE, B. S., D. V. S.,** Professor of Zoology and Veterinary Medicine.

B. S., Cornell University, 1896; D. V. S., Columbia University, 1898; Professor of Zoology and Veterinary Medicine, South Dakota Agricultural College, since 1898.

**ARTHUR BOONE CROSIER,** Professor of Commercial Science.

Student in Brandenburg, Kentucky, Academy and New Albany Indiana, Business College; Principal of Shorthand Department, Bryant and Stratton Business College, Chicago, 1896-1897; Professor of Commercial Science, South Dakota Agricultural College, since 1898; Admitted to practice law in South Dakota, October, 1904.

**ELMER KENDALL EYERLY, A. M.,** Professor of English Literature.

A. B., Franklin and Marshall College, 1888; A. M., Franklin and Marshall College, 1893; Student at Yale University, 1888-1889; Student at Berlin University, Germany, 1891-1892; Fellow in Sociology, University of Chicago; Professor Political Economy, Redfield College, 1889-1891, 1892-1893; Professor of English Literature, Yankton College, 1893-1899; Professor of English, South Dakota Agricultural College, since 1899.

**ADA BERTHA CALDWELL,** Professor of Industrial Art.

Student Art Institute of Chicago, 1893-1897; Instructor in Art, Yankton College, 1897-1899; Professor of Industrial Art, South Dakota Agricultural College, 1899-1903; Student Teachers' College, N. Y., and Chase School of Art, N. Y., 1903-1904; Professor Industrial Art, South Dakota Agricultural College, 1904-1907.

**ROBERT BLACKWOOD FORSEE, Pe. P.,** Principal of Preparatory Department.

Principal of Pedagogy, Western College, Missouri, 1888; Principal Elgin, Missouri, Schools, 1889-1891; Steffenville, 1892-1893; Estelline, South Dakota, 1895-1896; County Superintendent, Hamlin County, South Dakota, Schools, 1896-1900; Principal Preparatory Department South Dakota Agricultural College since 1901.

**ALBERT SPENCER HARDING, A. M.,** Professor of History and Political Science.

B. S., South Dakota Agricultural College, 1892; Fellow in American History, University of Nebraska, 1896-1897; A. M., University of Nebraska, 1897; Assistant in History and Civics, South Dakota Agricultural College, 1897-1900; Professor of History and Political Science South Dakota Agricultural College since 1901.

**JAMES WILBUR WILSON, M. S. A.,** Director of the Experiment Station and Professor of Agriculture and Animal Husbandry.

B. S. A., Iowa Agricultural College, 1896; M. S. A., Iowa Agricultural College, 1898; Assistant in Agriculture at the Iowa Agricultural College, 1896-1897; Private Secretary to Secretary of Agriculture from November, 1897, to March, 1900; Director of the Experiment Station and Professor of Agriculture and Animal Husbandry South Dakota Agricultural College since 1902.

**RUFUS BUEL McCLENON, A. M.,** Professor of Pedagogy and Latin.

A. B., Williams College, 1878; A. M., Williams College, 1881; Teacher in Granville Military Academy, N. Y., 1880-1882; Teacher in Lake Geneva Seminary, Wisconsin, 1882-1885; Principal Oconto, Wisconsin, High School, 1885-1887; Instructor in Beloit College, 1887-1889; Principal Sioux Falls High School, South Dakota, 1889-1893; Superintendent of Madison Public Schools 1893-1902; Principal Normal Department, Huron College, 1902-1904; Professor of Pedagogy and Latin, South Dakota Agricultural College, since 1904.

GEORGE DICKINSON GUYER, Professor of Military Science and Tactics.

Graduate West Point Military Academy, 1891; Graduate U. S. Infantry and Cavalry School, Signal School and Staff College (Post Graduate course), 1897; Battalion Adjutant 1899-1901; Detached Service-Ordnance Department, U. S. Army, 1897-1898; Organized Militia South Dakota 1905-1907; Instructor at Recruit Rendezvous Fort Slocum, 1902-1904; Engineer, Officer, Col. Hood Staff Northern Division, P. L., 1900-1901; Judge Provost Court 1900; War Service Spanish War, 5th Army Corps, Cuba, July 24th to August 15th, 1898; Philippine Insurrection, June 26th, 1899-July 8th, 1902; Professor Military Science and Tactics since September, 1904.

WILLIAM SOLOMON HAYES, A. B., Professor of French and German

A. B., Harvard University, 1899; Student in France, Germany, Italy and Spain, four years; Professor of the Romance Languages, University of Vermont, 1900-1905; Professor of French and German, South Dakota Agricultural College, since 1906.

EDITH MARY WILCOX, B. L., Ed. B., Professor of Home Economics.

B. L., University of California, Berkeley, California, 1905; Ed. B., University of Chicago, 1906; Professor of Home Economics in South Dakota Agricultural College since September, 1906.

HOMER MUNRO DERR, A. B., A. M., Ph. D., Professor of Civil Engineering.

A. B., Leland Stanford University, 1898; A. M., Columbia University, 1901; Ph. D., University of Pennsylvania, 1903; Elected Scholar in Physics, Clark University, 1899 and Scholar in Geology, Columbia University, same year; Assistant in Physics, Columbia University, 1899-1901; Instructor in Mining Engineering and Geology, University of Wyoming, 1901-1902; Tyndall Fellow, University of Pennsylvania, 1902-1903; Superintendent of Mines and in charge of dam construction for hydraulic mining, Santa Margarita Gold Mining Company, Department of Antioquia, Columbia, South America, 1903-1904; Professor of Mathematics and Civil Engineering, Clarkson School of Technology, 1904-1906; Professor of Civil Engineering at South Dakota State College since January, 1907.

ARTHUR AMBER<sup>\*</sup>BRIGHAM, Ph. D., Principal School of Agriculture.

B. S., Massachusetts Agricultural College, 1878; Professor of Agriculture in the Imperial College of Agriculture, Sapporo, Japan, 1889-1893; Ph. D., Gottingen University, Germany, 1896; Professor Agriculture, College of Agriculture and Mechanic Arts, Rhode Island, 1896-1901; Experimenting in Incubation at Ithaca, New York, 1901-1902; Director Columbia School of Poultry Culture, 1903-1904; Elected Principal School of Agriculture in South Dakota Agricultural College July 1st, 1907.

EVA R. ROBINSON, B. S., Preceptress School of Agriculture.

Graduate of Domestic Science Department, Armour Institute of Technology, 1900; Preceptress School of Domestic Science, Des Moines, Iowa, 1900-1902; Superintendent of Instruction in Home Economics, Quincy, Illinois, Elected Preceptress South Dakota School of Agriculture, 1907.

EDGAR WILLIAM OLIVE, A. M., Ph. D., Professor of Botany.

B. S., Wabash College, 1893; S. M., Wabash College, 1895; A. M., Harvard University, 1897; Ph. D., Harvard University, 1902; Assistant in Botany, Harvard University and Radcliffe College, 1897-1898; Instructor in Botany, Harvard and Radcliffe, 1898-1903; Research Student of the Carnegie Institute at University of Bonn, 1904-1905, and at University of Wisconsin 1905-1907; Lecturer in Botany, University of Wisconsin, 1905-1907; Professor of Botany, South Dakota Agricultural College, 1907.



**HENRY HANSON LOUDENBACK**, Professor of Music.

Graduate, Conservatory of Music, Campbell University, Helton, Kansas, 1902; Assistant in Piano and Theory of Music, Campbell University, 1901-1902; Director of School of Music, Atchison County High School, Effingham, Kansas, 1902-1906; Student in Virgil Clavier Piano School, New York City, 1903; Repertory with Allen Spencer in American Conservatory, Chicago, 1906; Professor of Music, South Dakota Agricultural College, since 1906.

**WILLIAM HOWARD POWERS**, A. B., M. A., Librarian and Associate Professor of English.

A. B., Miami University, 1891; A. M., Harvard University, 1899; Student in the Graduate School, Harvard, 1899-1901; Instructor in Mathematics, Ohio Normal University, 1888-1889; Master of the High School, Marwich, Massachusetts, 1892-1895; Head of the Department of English, High School, Pawtucket, Rhode Island, 1895-1898; Professor of English, Huron College, 1901-1905; Librarian and Associate Professor of English, South Dakota Agricultural College, since 1905.

**HOWARD H. HOY**, B. S., M. S., Instructor in Physics and Electrical Engineering.

B. S., South Dakota Agricultural College, 1896; M. S., South Dakota Agricultural College, 1903; Instructor in Mechanical and Electrical Engineering, South Dakota Agricultural College, 1899-1904; Instructor in Physics and Electrical Engineering in the South Dakota Agricultural College since 1904.

**HARRY G. SKINNER**, B. S. A., Assistant in Agriculture and Animal Husbandry.

B. S. A., Iowa State College, 1902; Assistant in Agriculture and Animal Husbandry in South Dakota Agricultural College since August, 1902.

**JOHN HARLAND NELSON**, B. S., Assistant in Mathematics.

B. S., South Dakota Agricultural College, 1905; Registrar and Assistant in Commercial Science, 1902-1903; Registrar and Assistant in Mathematics, 1903-1905; Assistant in Mathematics since 1905.

**JOHN S. COLE**, B. S., Assistant in Agriculture. In charge of Agronomy.

B. S., South Dakota Agricultural College, 1903; Special Agent U. S. Department of Agriculture, in 1905; Assistant Agronomist South Dakota Agricultural College, 1903-1904; Assistant Agriculturist in charge of Agronomy in the South Dakota Agricultural College and Experiment Station since July, 1905.

**MAUDE GODDARD**, Assistant in Art Department.

Student Art Institute, Chicago, 1903; Instructor at South Dakota Agricultural College since 1903.

**SHIRLEY PUTNAM MILLER**, M. A., Assistant in Zoology and Bacteriology.

B. S., South Dakota Agricultural College, 1903; M. A., University of Minnesota, 1905; Member of Minnesota Sea Side Station, 1902-1905; Assistant in Zoology and Bacteriology, South Dakota Agricultural College, since 1905.

**GEORGE ROCKWELL WESTCOTT**, B. S., Registrar and Assistant in Mathematics.

B. S., South Dakota Agricultural College, 1903; Professor of Mathematics, York College, York, Nebraska, 1903-1905; Registrar and Assistant in Mathematics, South Dakota Agricultural College, since 1905.



**WILLIAM J. JUNEAU**, A. B., Director of Athletics.

A. B., University of Wisconsin, 1904; Director of Athletics, Colorado College, Colorado Springs, 1904-1905; Director of Athletics, South Dakota Agricultural College, since 1905.

**FRANCIS J. HAYNES**, Instructor in Vocal Music and Band Leader.

Graduated in vocal music from Hillsdale (Michigan) College; Pupil of Mariscalchi; taught at various times in Western Reserve Seminary, West Farrington, Ohio; Bartell College of Music, Warren, Ohio; Streator Conservatory of Music, Streator, Illinois, and Michigan State Industrial School, Lansing, Michigan; Instructor in Vocal Music and Band Leader in South Dakota Agricultural College since 1906.

**CARL CHRISTENSEN**, Instructor in Stringed Instruments.

Studied with Professor Christian Madsen, of Copenhagen, Denmark; since coming to America has studied under several fine instructors, the most notable being Mr. C. F. Toenniges, of Davenport, Iowa, he being a pupil of Theodore Spiering, of Chicago; taught a year and a half in Brookings, South Dakota, before beginning his work at the South Dakota Agricultural College in 1906.

**ESTELLA MUSGRAVE**, Instructor in Elocution and Physical Culture.

Two years a student in Lombard College, Galesburg, Illinois; graduated from Mrs. Noble's School of Expression and English Literature, Detroit, Michigan, 1905; engaged in Chautauqua and Recital Work in Summer of 1906; Instructor in Elocution, South Dakota Agricultural College, since 1906.

**WILLIAM FREDERICK SCHAPHORST**, B. S., Instructor in Mechanical and Steam Engineering.

B. S., South Dakota Agricultural College, 1905; Assistant in Mechanical Engineering; Instructor in Mechanical and Steam Engineering, South Dakota Agricultural College, since 1906.

**BLANCHE EDINBOROUGH**, Assistant in Piano Music.

Studied Music at Midland College at Atchison, Kansas, later entered Campbell College at Holton, Kansas, graduating in 1902; studied at the American Conservatory of Music in Chicago with Victor Garwood; nine years experience in private teaching of music; Assistant in Piano Music at South Dakota Agricultural College since January, 1907.

**ROBERT MATHESON**, B. S. A., Instructor in Entomology.

B. S. A., Cornell University, 1906; M. S., in Agriculture, Cornell University, 1907; Instructor in Entomology in South Dakota Agricultural College since 1907.

**GERTRUDE S. YOUNG**, A. B., Instructor in Preparatory Department.

A. B., University of Wisconsin, 1906; Instructor in Preparatory Department in South Dakota Agricultural College, July, 1907.

**NOLA KATHERINE FROMME**, B. S., Assistant in Home Economics.

B. S. in Domestic Science, Ohio State University, 1905; Assistant in Home Economics, South Dakota Agricultural College, July, 1907.

**CARRIE LOUISE PHILLIPS**, B. S., M. S., Assistant Librarian.

B. S., South Dakota Agricultural College, 1901; M. S., South Dakota Agricultural College, 1905; Assistant Librarian since September, 1906.

**ARTHUR EDWIN KOCH**, B. S., Assistant in Chemistry.

Ph. G., South Dakota Agricultural College, 1904; B. S., South Dakota Agricultural College, 1906; Assistant in Chemistry, South Dakota Agricultural College, since 1906.

FRED A. COLLIER, B. S., Assistant in Chemistry.

B. S., South Dakota Agricultural College, 1906; Assistant in Chemistry in South Dakota Agricultural College since April, 1906.

ROY ORVIS WILSON, Secretary to the President.

---

## COMMITTEES

---

The Faculty meets regularly every Monday during term time, at 4:15 p. m. To facilitate the work and aid the Executive in disposing of minor questions, the following committees are appointed for the current year:

COMMITTEE ON CLASSIFICATION—Mathews, Wilson, Whitehead, Brown, Hansen, Moore, McClenon.

DEPARTMENT—Brown, Mathews, Eyerly, Powers, Wilson, Whitehead, Harding, Guyer.

ATHLETICS—Eyerly, Mathews, Wilson, Juneau.

LIBRARY—Powers, Harding, Eyerly, Shepard, Forsee.

LIVING AFFAIRS—Solberg, Forsee, McClenon, Nelson.

SOCIAL AFFAIRS—Crosier, Hansen, Caldwell, Hoy, Goddard, Guyer.

STUDENT LABOR AND GROUNDS—Hansen, Wilson, Solberg, Derr.

STUDENT ORGANIZATIONS AND PUBLICATIONS—Harding, Solberg, Hoy, Caldwell, Eyerly.

## REGENTS OF EDUCATION

---

HON. A. W. BURTT.....	Huron
HON. F. A. SPAFFORD.....	Flandreau
HON. S. E. FOREST.....	Britton
HON. E. C. ERICSON.....	Elk Point
HON. A. J. NORBY.....	Sisseton

---

## OFFICERS OF THE BOARD

---

HON. E. C. ERICSON.....	President
HON. F. A. SPAFFORD.....	Vice President
HON. I. D. ALDRICH.....	Secretary
HON. C. H. CASSILL (State Treasurer).....	Treasurer

---

## REGENTS' COMMITTEE FOR THE COLLEGE

---

HON. F. A. SPAFFORD

HON. A. J. NORBY

---

MR. R. A. LARSON,  
Secretary and Accountant, Brookings, S. D.

## STATION COUNCIL AND MEETINGS

---

The Station Council is composed of the Regents' Committee for the College, the President of the College and heads of staff divisions.

This Council meets regularly throughout the year on the first Wednesday of each month at 4:15 p. m., and at such other times as the Director may designate.

---

## AGRICULTURAL EXPERIMENT STATION STAFF

---

James W. Wilson, Director.....	Animal Husbandry
N. E. Hansen, Vice-Director.....	Horticulturist
James H. Shepard.....	Chemist
Edgar W. Olive.....	Botanist
E. L. Moore.....	Veterinarian

---

Wm. West.....	Foreman Station Farm
John S. Cole.....	Agronomist
H. G. Skinner.....	Assistant in Animal Husbandry
A. E. Koch.....	Assistant in Chemistry
Chas. Haralson.....	Assistant in Horticulture
Sylvester Baltz.....	Superintendent Highmore Sub-Station
F. C. Stoltenberg.....	Florist
R. A. Larson.....	Secretary and Accountant
Ben B. Lawshe.....	Station Stenographer



## OTHER REGULAR EMPLOYEES

---

Fred Betkey.....	Engineer
H. D. Hilton.....	Fireman
George E. Purdy.....	Janitor and Carpenter
Clarence A. Davis.....	Assistant Janitor
H. C. Hanson.....	Farm Teamster
William Wood.....	Horticultural Teamster
P. P. Hoff.....	Herdsmen
Lawrence McGarry .....	Farm Assistant
Peter Green.....	Night Watchman

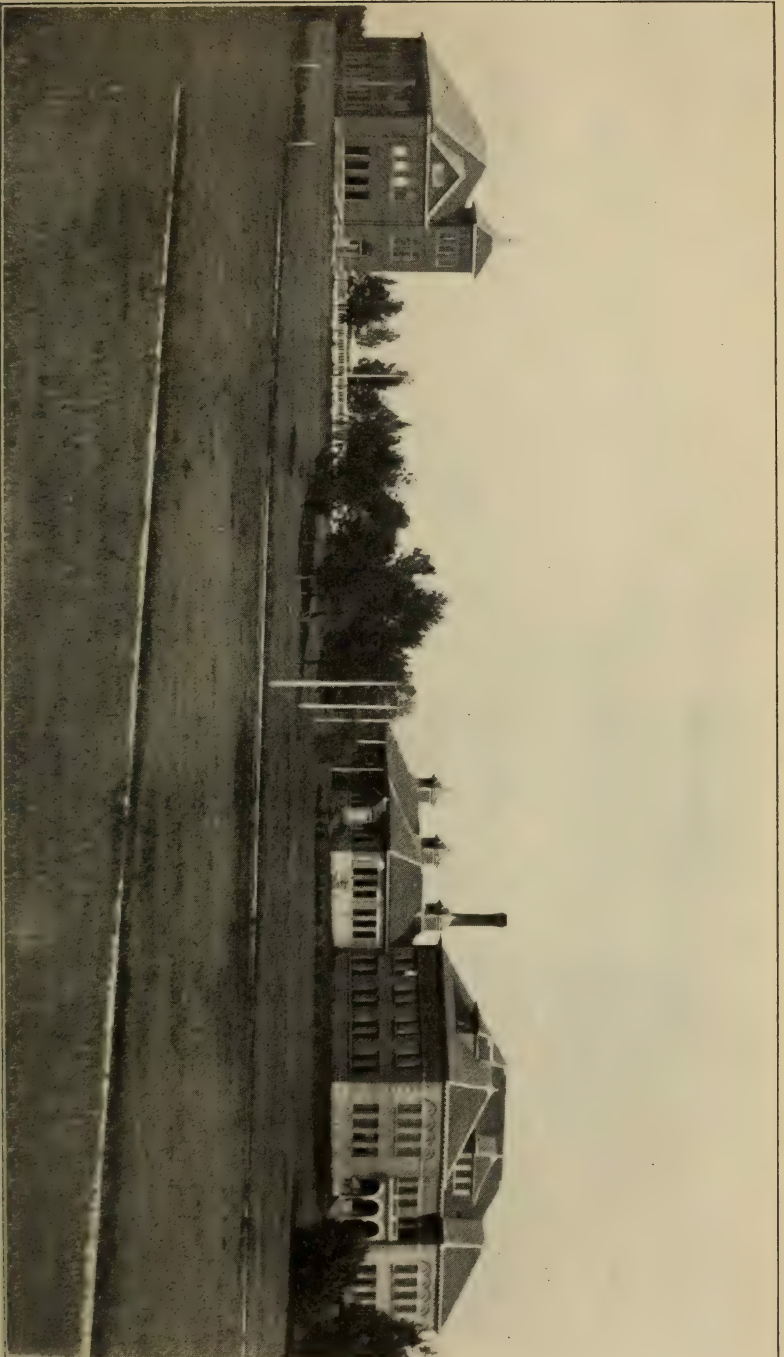
---

## TUTORS

---

Tutors for the several departments will be appointed and published at the opening of the new college year.

All students absent from regular college exercises will be expected to arrange with a tutor for making up omitted work.



*Botany and Horticulture and Engineering Buildings.*

## GENERAL INFORMATION

### A—Historical

1. ESTABLISHMENT.—An Act of Congress Approved July 2, 1862, gave to each state 30,000 acres of public lands for each representative in Congress towards "the endowment, support and maintenance of at least one college, where the leading object shall be, without excluding other scientific and classical studies, and including military tactics, to teach such branches of learning as are related to agriculture and the mechanic arts." In compliance with this act the territorial legislature of 1881 passed an act establishing an agricultural college at Brookings, in the territory of Dakota.

The legislature of 1883 provided for the erection of the first building. This building, now known as the Central building, was built in 1884.

Upon the division of the territory of Dakota into the states of North and South Dakota when admitted into the Union in 1889, the Agricultural and Mechanical College of Dakota became known as the South Dakota Agricultural College.

2. PURPOSE.—The college is devoted to advancing the interests of practical education, its purpose being to give men and women such training as will best fit them for the active duties of life, whether it be in the fields, the shops, the house, or in the class or counting rooms.

In the act of the legislature establishing the institution it was designated "The Agricultural and Mechanical College," and in the Congressional act these colleges were spoken of as "Agricultural and Mechanic Arts." While the school is popularly called the "Agricultural College," the mere precedence of the term does not make it more agricultural than mechanical.

In order to conform to the object for which the college was established, the legislature of 1907 changed the name to "The State College of Agriculture and Mechanic Arts."

Although the work of the institution is largely scientific, it is of such diversified character that the student can pursue work along almost any line which his tastes dictate. The aim of all

the work offered is to fit young people to occupy ably any position they may be called upon to fill, and to make better and more intelligent citizens of them.

A constant effort is made to reach the masses of the people in the state and interest them in the applications of science to industrial pursuits, and in the more general improvement of their home life and every day activities.

3. LOCATION.—The College is located in the east central part of the state, upon an eminence one mile from the business



*Gymnasium and Creamery.*

center of the city of Brookings, and four miles from the Big Sioux River.

Brookings has a population of about three thousand five hundred thrifty, intelligent and hospitable people. Its streets are lined with trees and there are very few houses where there are not well kept lawns, upon which are growing trees, beautiful flowering shrubs and plants. It has often been called the "City of Homes."

It is a city of clean morals. No saloon has been allowed



within its limits for several years. In the spring election of 1898 the proposition to allow saloons within the city limits was defeated by a vote of three to one, and in the general election of 1896 Brookings county was the banner county of the state in its vote against allowing intoxicating liquors to be sold in the state.

It is situated on the Central Dakota Division of the Chicago & North-Western Railway, three miles from its junction with the Watertown branch of the same road, which makes connections with the main line at this point.

4. SOURCES OF INCOME.—By the Congressional act under which South Dakota became a state, one hundred and sixty thousand acres of land were set aside as an endowment for the South Dakota College of Agriculture and Mechanic Arts. These lands are all selected; very little has as yet been sold. A small amount is now being received yearly as rental from the selected lands.

No school lands can be sold for less than ten dollars per acre, so that these lands, when sold, will probably yield an endowment of two million dollars, the interest from which will be sufficient for the needs of the College.

The "Morrill Act" passed by Congress in 1890 provides a yearly appropriation for "the more complete endowment and support of Colleges for the benefit of Agriculture and Mechanic Arts." Under this act the College, at present, receives from the general government the sum of \$25,000 per annum.

An act making appropriation for the Department of Agriculture, approved March 4, 1907, makes provision for the further endowment and support of these colleges. As the bill was first introduced by Senator Knute Nelson, of Minnesota, the fund is popularly known as the "Nelson Fund." It stipulates that the expenditure of the fund shall be governed in all respects by the provisions of the "Morrill Act." "PROVIDED, That said colleges may use a portion of this money for providing courses for the special preparation of instructors for teaching the elements of agriculture and the mechanic arts." This act carries an appropriation of \$5,000 for the year 1907-1908, and increases \$5,000 each year until it reaches \$25,000 per annum.

The "Hatch Act" passed by Congress provides for the establishment of Agricultural Experiment Stations in connec-

tion with Agricultural Colleges, and allows \$15,000 per year for the maintenance of the same.

The "Adams Act" passed by Congress and signed by the President, March 20th, 1906, increases the annual appropriation to Agricultural Experiment Stations. This act carries an appropriation of \$5,000 for the first year and increases \$2,000 each



*Central, Chemistry and Exp. Station Buildings and Heating Plant.*

year until it reaches \$15,000 per annum. The first appropriation under this act became available July 1st, 1906.

The state legislature makes biennial appropriations for the support of the College. At its last session about one hundred thirty-four thousand dollars were appropriated.

5. GENERAL POLICY.—It is the policy of the institution

to make itself in truth a part of the common school system; first, by continuing the work of the young people from the point in their education where the lower school stops, thus giving them an opportunity to become liberally and practically educated within the boundaries of their own state; second, by assisting in the training of public school teachers, especially in the various sciences.

6. **EXPERIMENT STATION.**—This department is organized under the Hatch act of Congress which appropriates fifteen thousand dollars from the United States treasury each year for its maintenance.

“It shall be the object and duty of said experiment stations to conduct original researches, and verify experiments on the physiology of plants and animals,”—enumerating some twenty other lines of research—“and such other experiments bearing directly on the Agricultural industry of the United States as may in each case be deemed advisable, having due regard to the varying conditions and needs of the respective states. To aid in acquiring and diffusing among the people of the United States useful and practical information on the subjects connected with agriculture.” The South Dakota station conducts its investigations principally upon the following lines: Live stock, soil, field experiments, greenhouse work, trees and small fruits, chemistry of plant growth and foods, and economic botany, entomology and zoology.

In planning the work of the station the main object sought is to assist the agricultural interests of the state. Education is derived from this in two ways; first, from the student's observation of the actual work; second, by reading the accounts and results of the work which are published in the form of bulletins and are available to anyone applying.

---

## **B—Equipment**

1. **CAMPUS.**—The College campus of thirty acres is beautifully located on an eminence within the corporate limits of Brookings. Under the charge of the horticultural department the campus, ornamented with choice and tasteful varieties of trees and shrubs and laid out with necessary drives and walks is a good example of landscape gardening. Adjoining on the



rear is a fifty-acre plat which is devoted to horticultural gardens and the United States forestry experiments. This portion is laid out regularly in suitably sized plats with longitudinal streets at appropriate distances apart, thus giving a beautiful and symmetrical effect to the observer from the College buildings.



*President's Residence.*

2. BUILDINGS.—The oldest building on the campus, a three-story brick structure known as the "Central Building," was completed in 1885, and is devoted to administrative and instructional purposes. The "Station Building," also a three-story building, is occupied principally by the experiment station laboratories. The "North Building" is a four-story brick building, the first floor of which is used as a chapel room, the two



floors above furnishing quarters for the Art and Domestic Science departments. The "Chemistry and Pharmacy Building," the "Drill Hall" and the "Creamery" are all two-story buildings of modern design, and well equipped with apparatus.

The "Engineering and Physics Building," the "Plant Breeding Building" and the "Greenhouse," by their substantial and imposing appearance, add much to the beauty of the campus, and furnish ample room for the departments which occupy them. Class rooms and fine laboratories are provided in the barn for work in soil physics, agriculture and allied subjects.

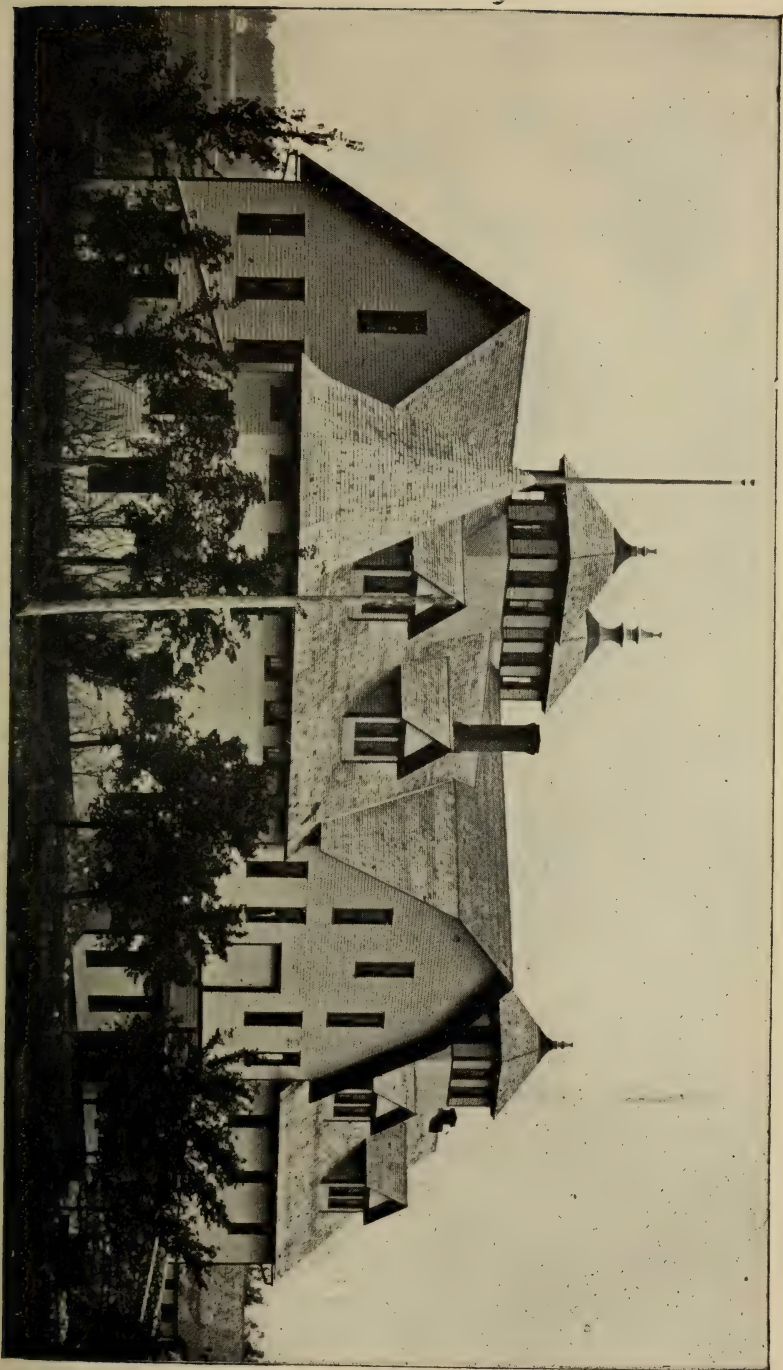
A modern central heating plant occupies a fine brick structure back of the main buildings.

3. FARM.—Set apart as the College farm is a tract of four hundred and eighty acres near the campus, about sixty acres of which are used by the Agricultural Experiment Station as an experimental farm. Here the field experiments with field crops, seed germination and soil preparation are conducted, and the student electing it can witness and actually participate in this scientific work. The remainder of the farm is used as a model stock and dairy farm under the direction of the professor of animal husbandry. Practical work and experiments involving the best farming practices for this region are given the students.

4. DORMITORIES.—Originally the institution provided dormitories for both sexes. But the attendance has increased so much more rapidly than the class room facilities that it has been necessary to convert the dormitories into rooms for the departments. For a period of years no living arrangements in connection with the College have been provided; but increased difficulty in securing rooms in the city induced the legislature of 1907 to make an appropriation of \$50,000 for a dormitory for the young ladies. This building is expected to be ready for occupancy September, 1908.

5. LABORATORIES.—The work of the institution being so largely scientific in nature well-fitted laboratories have been provided in all those departments where their use is made necessary by the most modern and approved educational methods. The farm with its equipment, together with the horticultural gardens and the greenhouse, serves as a laboratory for the departments of Horticulture and Agriculture.

6. GYMNASIUM.—The spacious gymnasium for the boys



Barn.

and the commodious physical culture rooms for the girls are well equipped with dumb-bells, Indian clubs, chest weights, and other apparatus to which additions are being made from time to time. Both of these departments have connected with them bath and toilet rooms of the most approved design, and the physical training is under the direction of competent instructors.

7. **ATHLETIC GROUNDS.**—In connection with the gymnasium a tract of land is used as a place for holding outdoor exercises and sports of an athletic character. These grounds are enclosed with a high board fence, and a comfortable amphitheatre affords a large seating capacity to spectators.

8. **LIBRARY AND READING ROOM.**—The library, occupying rooms on the first floor of the Central Building, contains over 9,000 bound volumes and about 6,000 pamphlets. The institution is a repository for the government and contains a set of government publications dating from 1886. Many of the more valuable sets have been extended to an earlier date. Care has been exercised in the selection of books, in order that each department may have proper reference books at the disposal of the students. The books are arranged according to the Dewey system of classification and are completely catalogued in the card catalogue. The library also receives the cards from the government, cataloguing the bulletins of the experiment stations and the publications of the Department of Agriculture. The files of many standard scientific and literary periodicals are kept bound. The reading room is abundantly supplied with current periodicals and newspapers. The library is nearly all the time, day and evening, at the disposal of students for the purpose of study and reading. Someone is in charge at all times to give help and information to those using the library.

9. **MUSEUMS**—The idea that museums are valuable as educational factors only as they furnish illustrative material for study, has obtained in the collection of the various specimens and their arrangement in the several department museums. The Zoological, Botanical, Geological, Art and Engineering departments have made especially good beginnings in getting together material for that purpose. Constant additions are being made thereby increasing their worth as adjuncts to laboratory work. The different collections are kept in the departments to which they belong.



10. GENERAL STUDY ROOM.—A general study room for the young ladies, in conjunction with the necessary retiring rooms and toilet facilities, occupies part of the basement of the North Building. The ladies of Brookings have very generously furnished part of the fittings necessary to its homelike appearance.



*Library.*

11. LECTURE AND CLASS ROOMS.—The class rooms are fitted to accommodate from thirty to fifty students each. Lecture rooms are fitted with arm-rest chairs for ease in taking notes. The main lecture or assembly room is provided with opera chairs for seating about four hundred, and a fine electric dissolving projection lantern for illustrative purposes.

12. SANITARY CONDITIONS.—The water supply is of the very best, the water being of good quality and very pure. The rarity of zymotic and infectious diseases among the students is a proof that the sanitary conditions are excellent.



13. **HEATING**—Good heating arrangements are a necessity in almost any climate, but in a cold climate their importance increases. The main buildings are all heated with steam generated in a central heating plant. This plant also furnishes steam for running the machinery in the shops and generating electricity for lighting. Largely for purposes of cheerfulness and ventilation, fireplaces are provided in some of the offices.

14. **LIGHTING**:—The College owns and controls its own electric light plant, thus making the light at all times available and economical. Some of the rooms are provided with gas, which for purposes of illumination is used in Welsbach burners, making a brilliant light.

15. **POSTAL FACILITIES**.—The College furnishes first-class postal facilities, the mail of the students being delivered in one of the buildings at convenient times during the day, making it unnecessary for them to walk to the postoffice.

---

## **C—Administration**

1. **GOVERNING BOARD**.—By an act of the legislature approved March 10, 1897, provision was made for the appointment of the "Regents of Education," who should have charge of all the educational institutions of the state.

The law is, "The Governor, by and with the consent of the senate, shall appoint five persons of probity and wisdom from among the best and best known citizens, residents of different portions of the state, none of whom shall reside in the counties in which any of the state educational institutions are located, who shall be designated the regents of education." The terms of office of these regents, when first appointed, were of different lengths, and after the first terms, are each six years, thus making it a continuous body. Vacancies are filled by the Governor during the recesses of the senate. "The board shall organize by electing one of their members president, and by the election of a secretary. Thus qualified and organized they shall have authority to make such rules as are necessary for their own government as a board and shall immediately assume the exclusive control and management of all the educational institutions which are maintained either wholly or in part by the state." Along this line the powers and duties of the regents

are defined, among which important ones may be mentioned, to employ or dismiss members of the different faculties and other agents, to determine the proper number of teachers in said faculties, also their compensation and terms of employment, to establish departments, to settle upon courses of study, to determine the rules to be enacted for the government of students, to decide upon text books to be used, to fix tuition fees, to guard against unwise duplications of departments, to confer degrees, to control the Agricultural Experiment Station, and to promote education among the farmers by providing for institutes; in fact, to make all regulations as to the executive and instructional functions of the educational institutions of the state. The regents govern the College largely through a regents' committee.



*Campus.*

2. FACULTY.—The faculty, consisting of the president and professors, all of whom are elected by the regents, determines in large part the general policy of the College. The professors are heads of the different departments of instruction which they represent and are responsible to the president, who is in charge of all matters of administration. The president, in turn, is responsible to the regents for the whole work of the institution. In order to aid the president in his executive duties, he appoints, at the beginning of each college year, certain faculty committees, which take up such work as may be assigned them

by the president and faculty, and thus greatly facilitate the transaction of business and economize the time of the faculty. (For list of committees for 1907-1908, see page 9)

3. STUDENT AFFAIRS.—Students are allowed wide latitude in carrying on affairs which vitally concern themselves, such as athletic, literary, musical and social organizations. The faculty, in all these matters, retains an advisory interest and aims to assist the students in every possible way in making these elements especially helpful to the student body as a whole. In the matter of social enjoyments the faculty is disposed to allow a reasonable amount of time for recreation, and endeavors to contribute as far as possible towards making the students happy and contented.

4. REQUIRED EXERCISES.—There are certain requirements in the way of work required of every student, among which are military exercises and physical culture. These subjects are thought to be of sufficient importance that every student can take them with profit.

5 STUDENTS' LIVING ARRANGEMENTS.—The faculty maintains the right to pass upon the living arrangements of every non-resident student. Residents of the town with whom students are boarding or lodging are requested to co-operate with the faculty in the efforts to improve the general condition of the students by exercising over them a careful supervision and reporting to the faculty any misconduct on the part of the students which may come to their notice. Upon coming to Brookings students should report at once to the president's office, where they will be furnished all possible information with reference to their living arrangements.

6. STUDENT CONDUCT.—The chief end of school life being to obtain thorough mental and moral discipline, it becomes incumbent upon the faculty to make the conditions as far as possible conducive to that attainment. No set regulations are expected to cover every contingency arising, but it is necessary that all students should recognize the fitness and importance of such restraints as are in force, and co-operate in securing their observance. In the absence of any rule applying, the student's own good judgment should suggest the proper procedure.

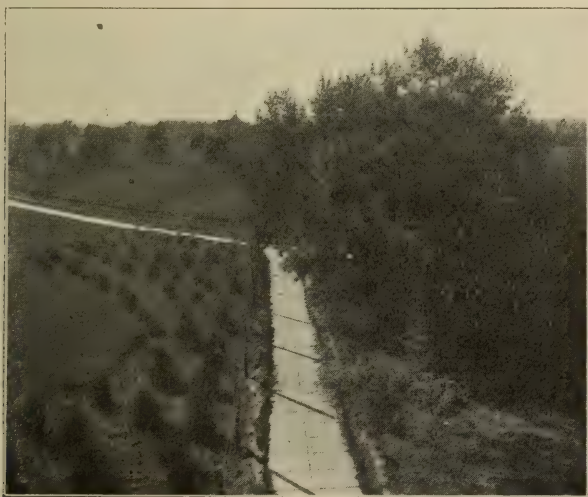
7. TUTORING.—Students absent from class or College exercises or otherwise being unable to keep up with the work of



their classes, will at the suggestion of the head of the department arrange with a regular tutor of that department for assistance.

### D—Special Information for Students

1. TIME TO ENTER.—Students are admitted at any time and assigned to such classes as they are found best fitted to enter, but it is much better to commence at the beginning of the college year. No reduction in college fees is made when the student enters after the beginning of a term, and if a student enters late he will not under any condition be allowed to hold a class back. If a tardy beginning is imperative the student must



*Campus.*

arrange with a tutor to assist him in bringing up his work, in order that he may go on understandingly and without hindrance to the class.

2. EXPENSES OF STUDENTS.—No young person should be deterred from obtaining a liberal education when such advantages as this college offers can be had at a nominal price. The registration fees are six dollars per semester and are payable at the time of registration. Books and stationery are furnished by the student. A laboratory fee of two dollars per semester is charged for the use of each laboratory in which a



student takes work. An estimate of the yearly expenses of a student is given below in three grades, viz:

	LOW.	AVERAGE.	LIBERAL.
Tuition and Incidental Fees.....	\$ 12.00	\$ 12.00	\$ 12.00
Board and Room.....	110.00	140.00	160.00
Laundry.....	12.50	15.00	25.00
Books and Stationery.....	15.00	25.00	35.00
Laboratory Fees.....	0.00	3.00	8.00
	<hr/> \$149.50	<hr/> \$195.00	<hr/> \$240.00

Male students are expected to purchase uniforms, which range in cost from \$12.00 to \$18.00, and female students must furnish themselves with special costumes, which are not necessarily expensive, for use in physical culture.

3. TERMS AND VACATIONS.—The college year is divided into two semesters. The principal vacation of the year occurs in the summer, from the early part of June to the middle of September. The work of the first semester in 1907 begins September 18th and continues until January 31st. The Christmas vacation will extend from December 20th to January 6th. The second semester will begin February 3rd, continuing to the close of the college year, June 10th. The spring vacation will extend through the first week in April.

4. LIVING ARRANGEMENTS.—Boarding facilities are not provided in connection with the College. Every effort is made, however, by the officers of the institution, to secure suitable and satisfactory boarding places for students and a special faculty committee has this matter in charge.

Good rooms can be secured in the city at private houses or hotels for 50 cents per week and upwards. There are also many places where rooms and board can be obtained at reasonable rates. A list of approved available places for boarding or rooming can, at any time, be obtained from the president of the College. The Christian Associations make it a point at all times to assist new students in finding proper living accommodations.

5. STUDENT LABOR.—The terms are so distributed through the year as to give the longest period of vacation possible in the summer, thus enabling students to earn money. There is a limited amount of paid labor about the institution which can be

done by students and it is the policy of the regents to give as much work to deserving students as is consistent with the best interests of all. However, no one should expect to earn his entire expenses while at college and doing school work, or be assured of an income in advance from paid labor.

6 SCHOLARSHIPS.—The following article from the law, defining powers and duties of the regents of education, is self-explanatory: "The regents of education shall fix all rates of tuition and of other fees to be paid by students, but such rates must be the same in all the different institutions. They may



*Lane in Forest.*

receive free of tuition two students appointed by each senator and one by each representative of the state legislature in any one of the institutions under their control, provided that the period for which appointment was made shall expire with the term of office of said senator or representative, and provided that such appointees shall comply with all the rules and requirements of the institution which they desire to enter. No student, however, shall receive any other gratuity whatever." The regents of education make this article operative in the case of this institution.

7. CO-EDUCATION.—Recognizing the value of Industrial training as a feature of a practical institution for the masses, the College authorities have provided the various shops and

laboratories in which the young men of the state may become familiar with the uses of the different tools required in the principal mechanical industries. These special facilities are not confined to the young men, but special departments such as Home Economics, Art and Music have been established, so that the young lady students may have opportunities to fit themselves for a keener appreciation of the realities and enjoyments of life in the home, the school room, the store, the office or the factory. The young woman will profit as much by the intro-



*Track Team.*

duction of rational methods into her education as the young man, and while the shops, studios and laboratories may be used in some instances by the young man, and in others by the young woman, they are all open to both and in most cases students of both sexes will be seen working side by side. Instead of military drill the young lady students are required to take physical culture.

8. **MILITARY REQUIREMENTS.**—The national law organizing and endowing these agricultural colleges requires that



military science shall form part of the instruction offered. For the regulations governing these requirements, see Military Department.

9. **PHYSICAL CULTURE.**—Physical Culture is required of female students twice a week for the first three continuous years of the time they are students in the institution, or until the



*Y. W. C. A. Cabinet.*

Sophomore year is completed. Students taking Physical Culture will furnish special costumes for the same as indicated by the instructor. In regard to excuses from Physical Culture, the same rule holds as in the case of military exercises.

10. **CHAPEL EXERCISES**—Chapel exercises are held on each college day and all students are cordially invited to attend. The exercises on Tuesday usually consist of announcements and



an address by some competent person. Attendance on Tuesdays is required of all students.

11. PUBLIC ENTERTAINMENTS.—In all cases of public entertainments the students taking part are required to submit their exercises first to the officer regularly in charge of such work and to rehearse before the instructor in Elocution at least ten days before the day of public performance, and as often as the instructor may designate.



*Y. M. C. A. Cabinet.*

12. ATHLETICS.—Many forms of athletic exercises are practiced and are recommended and encouraged by the officers of the College. Under the auspices of the local organization and a number of College Athletic Associations of the state, all kinds of athletic sports are practiced and encouraged. The local representatives contest at the "State Meet" once a year for athletic honors. Students should understand, however, that their studies must receive the first consideration; and that the purpose of athletic exercises is to develop gentlemanly and lady-like qualities in those who participate in them.

13. STUDENT ORGANIZATIONS.—In the matter of student societies, the faculty allows the greatest freedom consistent with the general welfare. Those organizations which receive financial support from the student body and the general public are required to submit, at the close of the school year, a detailed report to the proper committee from the faculty.

14. LITERARY SOCIETIES.—A generous and fruitful rivalry for college honors exists between them, stimulating each to its best efforts. These societies are an important factor in the student's education and all are strongly advised to become members. All preparatory students are expected to become members of the Franklin society. The work of this society is carried on under the supervision of the head of the preparatory department and has a special function as a preparation for college society work. The faculty, realizing the value of society work, has offered a trophy to be competed for by the Athenian and Miltonian literary societies. These societies are composed entirely of college students and meet in their respective halls on every Saturday evening.

15. CHRISTIAN ASSOCIATIONS.—In state schools the Young Men's and Young Women's Christian Associations occupy unique positions. They are the only organizations whose primary object is the moral development of the student body. Their platforms are broad enough to allow every student of whatever belief, who stands for cleanness and kindness, to affiliate himself or herself with them. The effect of belonging to such organizations, in whose membership are represented many beliefs among the students of forty nations, cannot help but be broadening and helpful; and a membership card secures the privileges of membership in every association. The purpose of the associations is to present the value of Christian living to the student, and to the state, and to create an atmosphere of goodfellowship among "brotherly men" and womanly women. The Y. M. C. A. is personally supervised by the state secretary of South Dakota, who is engaged to spend half time at the S. D. S. C. The Y. W. C. A. is supervised by the state, and "International" college secretaries. If prospective men students will write to Mr. Geo. C. Phillips, Webster, S. D., and prospective women students to Miss Edith Hubbart, Brookings, S. D., they will be glad to

arrange for meeting them at the train and helping to secure boarding and rooming places.

16. ORATORICAL ASSOCIATION.—The purpose of this organization is to promote the art of public speaking among the students of the college. Each year it sends a representative selected in a preliminary contest, to the inter-collegiate contest of the state. In order that this contestant may fully represent the College, the faculty has imposed the requirement that those competing for this honor must be pursuing regular work for the Bachelor's degree above that of the Freshman year.

17. OTHER ORGANIZATIONS.—Among other organizations may be mentioned the Athletic Association, which concerns itself with the athletic interests of the college; and technical societies, such as the Art Club, Pharmacy Club, Choral Union, Euterpe Society, etc., each occupying its own sphere of influence.

18. PRIZES.—Business men of the city have taken an active interest in certain lines of college work, and in order to stimulate interest in those lines have offered prizes to be competed for annually by the students. The following prizes are offered:

Twenty dollars, cash prize, by Mr. Horace Fishback, to the student winning first place in the local oratorical contest.

Ten dollars, cash prize, by Mr. Horace Fishback, to the student winning second place in the local oratorical contest.

Fifteen dollars, photographic work, by Mr. Jerome, to the student winning first place in the local oratorical contest.

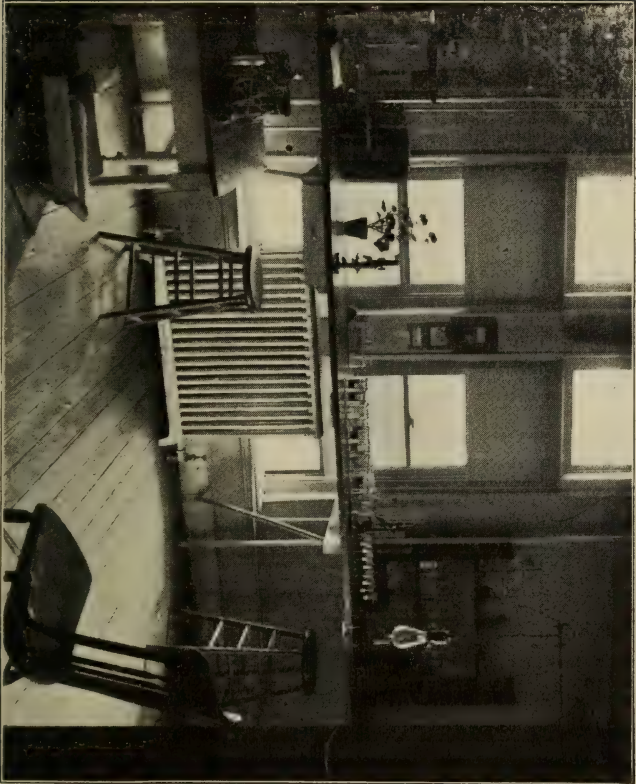
Ten dollars, photographic work, by Mr. Jerome, to the student winning second place in the local oratorical contest.

Ten dollars, cash prize, by Dr. J. G. Parsons, to the student presenting the best paper upon some scientific subject. This year the subject is "The Doctrine of Evolution."

Ten dollars, cash prize, by Dr. E. C. Miller, for the most complete set of drawings on the anatomy of the cat.

Additional information concerning the prizes offered by Dr. Parsons and Dr. Miller may be obtained from the Department of Zoology.

19. STUDENT PUBLICATIONS.—The "Industrial Collegian" is a sixteen-page monthly magazine published by the students of the College. The "Collegian" aims not only to be an organ



*Portion of Zoology Laboratory.*



of the student body but a mirror of student life at this institution. The editorial staff is composed of the Editor-in-Chief, a Business Manager, and one member selected by each regularly organized literary society in the College. The Editor-in-Chief and Business Manager are selected at the close of each Winter term by the students who are at the time of such election bona fide subscribers of the "Collegian." The "Jack Rabbit," an annual gotten out by the Junior class, is a good representative and an exponent of college life.

20. COLLEGE WORK.—The instructional work of the institution divides itself naturally into two main classes, studies which lie at the foundation of the Agricultural processes and those which bear more directly upon technological lines of work, such as Mechanical, Electrical and Civil Engineering. The work of the College is moreover offered in such a way as to be best adapted to individual characteristics and needs and at the same time to secure for all a well rounded and symmetrical development.

21. GENERAL CONDITIONS OF ADMISSION.—The candidate for admission to the College must be at least fourteen years of age and of good moral character. Students applying for entrance to the Preparatory department must present evidence that they have completed the work of the public schools as far as the ninth grade, and no one is allowed to pursue the work of the Freshman year or higher work until grades in the Preparatory years have been obtained.

22. TIME OF ENTRANCE EXAMINATION.—The first two days of the first semester will be devoted to examining students applying for admission, both to the College and the Preparatory department.

23. ENTRANCE CONDITIONS.—A student may be admitted to the College without having passed in one or two of his entrance studies. These shall stand against him and must be cleared up within one year after entrance or the student will be required to take the subject with the regular classes.

24. CREDITS FROM EXAMINATIONS.—Students will be allowed to take examinations in any subject offered without being regular members of the class pursuing that subject, if they have standings in all the prerequisites to that subject, provided that

the head of the department concerned is convinced that the subject has been covered in a satisfactory manner; and having passed in the subject, students shall receive due credit therefor.

25. **ADMISSION FROM OTHER INSTITUTIONS.**—Students will be admitted to the College upon certificates from other reputable institutions, provided that these show that the students were honorably dismissed from those institutions, and have satisfactorily completed the work for which credit is asked.



*Corn Judging.*

The College reserves the right, however, to cancel grades accepted from other schools should the student be found deficient in the subjects for which credit has been given.

26. **SPECIAL STUDENTS.**—Students of mature years who have passed in the work of the Preparatory department, may be allowed to pursue special studies if not candidates for a

degree, but they must satisfy the faculty that they are qualified to take up the studies desired.

27. **METHOD OF REGISTRATION.**—The student should obtain a classification card in the registrar's office upon which is written the names of the subjects to be pursued, according to the rules governing classification. The classification committee of the faculty will furnish all possible assistance in classifying students. New students must also fill out and file with the registrar cards giving desired information concerning themselves. Standings from the public schools or other educational institutions should also be filed with the registrar at this time. Upon receipt of the fees for the term, the secretary of the College stamps the classification card, which is then to be presented to the different instructors under whom work is to be taken for their signatures, and in order that they may also enroll the student in their classes. This card should then be returned to the registrar. In no case should it be retained longer than three days after being issued.

28. **COURSES DEFINED.**—A full recitation course is a five hour per week lecture or text book study for one semester, and is designated as a small (a) course. A full laboratory course is a ten hour per week exercise for a whole semester, and is designated as a small (b) course. A course combining recitation and laboratory work is designated as a small (a, b) course. No student will be permitted to take more than four and one-half nor less than three courses in any one semester without special permission from the classification committee.

29. **GRADES.**—All grades are reported to the registrar in figures on a scale of 100 as perfect. Grades are reported to students in classes as follows: Class "A," representing grades between 90 and 100. Class "B" from 80 to 90. Class "C" from 70 to 80. Classes "D" and "F" for all grades below 70. Students having a term grade of "A" may not be required to take final examination with their class. Grade "D" indicates that the student is conditioned, and may make up the work under a tutor, providing that this is done before the course is again offered. "F" indicates that the subject in question must be repeated with a regular class before a passing grade is obtained.

In determining a final grade ordinarily twice the recitation



grade is added to the final examination grade and one-third of the sum is the "final grade." Large latitude is given the teacher, especially in the more advanced work, in the student's "final grade."

30. **CONDITIONED STUDENTS.**—No student is allowed to register for advanced work who is conditioned in more than one



*Campus.*

course pursued in any one preceding semester; neither will a student be permitted to register for advanced work at the beginning of any college year with more than one condition from previous work except when the student by permission changes his major and minor and satisfies the faculty that he is unable to remove conditions.

31. **ATTENDANCE AND DISMISSAL.**—Students are expected to attend regularly all the exercises of the classes to which they are assigned from the date of their classification. When once classified they are required to be present from the beginning of each semester thereafter, until regularly dismissed.

When a student finds it necessary to be absent he should get an excuse in advance, if possible. Otherwise he should present a properly written request for an excuse to his instructor by the second day after his return to class. Excuses will be granted only when the absence seems necessary.



Unexcused absences from classes are reported by the instructors to the registrar. Any student having three unexcused absences will have his case referred to a special committee for investigation. Should a student find it necessary to be late to his class he should make a satisfactory explanation at the close of the period to his instructor, otherwise the tardiness will be marked unexcused. Three unexcused tardinesses will count as an unexcused absence.

All omitted work must be made up within two weeks after return to College duties, unless the health of the student requires a longer period. This omitted work must be made up according to the direction of the instructor and at times designated by him or the tutor in charge of same. Should a student find it necessary to sever his connection with the institution before his work is completed at any time during the semester, he should report to the president his reasons and secure an honorable dismissal; otherwise no standings will be entered in the records giving him credit for work done during the semester.

32. CHARGE FOR TUTORING.—The charges which tutors are allowed for giving instruction are graded according to the nature of the work and the number of students taking work together, and for single periods, the maximum length of which is one hour, are shown by the following scheme:

Number of students.....	1	2	3	4	5	6 or more
First Year Preparatory subjects .....	15c	25c	35c	40c	45c	50c
Second and Third Year Preparatory subjects .....	20c	30c	40c	45c	50c	55c
Fresh. and Soph. subjects.....	25c	35c	45c	50c	55c	60c
Junior and Senior subjects.....	30c	40c	50c	55c	60c	65c

In the absence of any instruction from the teacher as to the time a student should spend with a tutor in making up work, the tutor should see that the student covers the work which the teacher has assigned.

Students will be held responsible by the faculty for the payment of tutor fees. These must be paid to the respective heads of departments who will hand the same over to the tutors as soon as satisfactory reports concerning the work done have been received from the latter.

Should a student be absent from an appointment which has been made with a tutor, he shall be required to pay the same fee as if he had been present

33. DEGREES—Students who complete the two years pharmacy course receive the degree of Pharmacy Graduate (Ph. G.)

Those who complete the full four years course in either agriculture, horticulture, domestic science, general science, mechanical engineering, electrical engineering or civil engineering, receive the degree of Bachelor of Science (B. S.) in the above specified lines of work which they pursue. For this degree the student must complete in a satisfactory manner the work of one of the schemes mentioned in paragraph 37. This requires not less than twenty-eight courses above the Sub-Freshman year exclusive of military or physical culture.

The advanced degree of Master of Science (M. S.) will be conferred upon students who complete the appropriate undergraduate course in any of the above lines of study, and an additional amount of work equal to ten courses to be chosen along appropriate lines and in not more than two departments, in each of which credit for at least four collegiate courses has already been obtained, the advanced work to be done as prescribed by the faculty. Six or more of the courses, constituting the "major," must be chosen from one department. At least one year of this work must be done while in residence.

In order to meet a constantly increasing demand for better equipped, and more thoroughly trained men along the several lines of engineering activities, an additional or fifth year course of study is offered in the three engineering departments. Upon the completion of this additional year's work, the advanced degree, "Mechanical Engineer" (M. E.), "Electrical Engineer" (E. E.), "Civil Engineer" (C. E.), will be conferred.

This work is nearly all prescribed and is a continuation of the work pursued in the undergraduate courses, and is intended more fully to equip the student with special training along the particular line of work which he desires to pursue after leaving college.

34. DEPARTMENT.—Every student is allowed the fullest freedom of conscience and is supposed to have well grounded habits of politeness, industry, punctuality and integrity, but



*Soil Physics Laboratory.*

certain faculty regulations are necessary. Smoking is prohibited upon the College grounds. Few rules are made by the authorities, but for disregard of duties, the breaking of rules, or any ungentlemanly or unladylike conduct proper punishment will be inflicted.

35. SPECIAL COURSES.—The College also offers special courses in several important and practical lines of work. These are mentioned in connection with the departments principally concerned and are as follows:

1. Two years' work in Pharmacy.
2. One year's work in Business Branches.
3. One year's work in Amanuensis Branches.
4. Five months' work in Steam Engineering.
5. Thirteen weeks' work in Dairy Science.
6. Thirteen weeks' work in Domestic Science.
7. Special work in Vocal and Instrumental Music
8. Special work in Art.
9. Lectures on Animal Husbandry, six weeks.
10. Lectures on Farm Practice, six weeks.
11. Lectures on Horticulture, six weeks.
12. Lectures on Veterinary Medicine, six weeks.
13. Lectures on Poultry Husbandry, two weeks
14. Lectures on Corn Judging, two weeks.
15. Lectures on Stock Judging, two weeks.

36. SCHEMES OF STUDY.—The work leading to a Bachelor's degree may be done according to any one of the courses mapped out on pages 44 to 58. Through these the work of the College is adapted not only to different classes of students, but to individual students themselves. The entrance requirements to each of these groups, is the work of the three preparatory years.

37. SCHEDULES.—On the next few pages the schedules of the work leading to the Bachelor degrees are given. The notation immediately after the name of a subject indicates its nature and the number of times it occurs a week, "a" referring to the class work, and "b" to the laboratory exercises. For requirements in military exercises and physical culture see Military Department and Department of Elocution and Physical Culture.



## AGRICULTURE.

### FRESHMAN YEAR.

#### FIRST SEMESTER—

Advanced Rhetoric, a 4.....	English	7
Elementary Chemistry, a & b 5.....	Chemistry	1
Plane Trigonometry, a 2.....	Mathematics	9
Stock Judging, a 4.....	Agriculture	1
Military, 3.....		
Elective, a 4.....		
French, a 4.....	French	1
German, a 4.....	German	1

#### SECOND SEMESTER—

Advanced Rhetoric, a 4.....	English	8
Elementary Chemistry, a & b 5.....	Chemistry	2
Surveying, b 2.....	Civil Engineering	2
Breeds of Live Stock and Stock Breeding, a 4.....	Agriculture	2
Military, 3.....		
Elective, a 4.....		
French, a 4.....	French	2
German, a 4.....	German	2

### SOPHOMORE YEAR.

#### FIRST SEMESTER—

General Zoology and Physiology, a 2, b 3.....	Zoology	2
General Botany, a 2, b 3.....	Botany	1
Quantitative Chemistry, a & b 5.....	Chemistry	3
Military, 3.....		
Elective, a 4.....		
French, a 4.....	French	3
German, a 4.....	German	3

#### SECOND SEMESTER—

General Zoology and Physiology, a 2, b 3.....	Zoology	3
General Botany, a 2, b 3.....	Botany	2
Agricultural Chemistry, a 3.....	Chemistry	6
Genetics, a 2.....	Horticulture	2
Military, 3.....		
Elective, a 4.....		
French, a 4.....	French	4
German, a 4.....	German	4

### JUNIOR YEAR.

#### FIRST SEMESTER—

Structure and Style, a 2.....	English	11
History, Medieval, a 3.....	History	7

---

Psychology, a 3.....	Philosophy	1
General Physics, a 3, b 2.....	Physics	3
Elective, one of the groups.		

## Animal Husbandry Group.

Entomology, a & b 2.....	Zoology	10
Stock Judging, a 2.....	Agriculture	3
Elocution, a 1.....	Elocution	5

## Horticulture Group.

Entomology, a & b 2.....	Zoology	10
Pomology, a 2.....	Horticulture	1
Elocution, a 1.....	Elocution	5

## Veterinary Group.

Veterinary Anatomy, a & b 5.....	Veterinary	1
----------------------------------	------------	---

## Agronomy Group.

Soils, a & b 5.....	Agriculture	4
---------------------	-------------	---

## SECOND SEMESTER—

Structure and Style, a 2.....	English	12
History, Modern, a 3.....	History	8
Ethics, a 3.....	Philosophy	2
Elective, one of the groups.		

## Animal Husbandry Group.

Entomology, a & b 2.....	Zoology	11
Horse Shoeing and Lameness, a 2.....	Veterinary	5
Farm Crops, a & b 5.....	Agriculture	6
Elocution, a 1.....	Elocution	6

## Horticulture Group.

Entomology, a & b 2.....	Zoology	11
Floriculture, a 2.....	Horticulture	3
Farm Crops, a & b 5.....	Agriculture	6
Elocution, a 1.....	Elocution	6

## Veterinary Group.

Veterinary Anatomy, a & b 5.....	Veterinary	2
Horse Shoeing and Lameness, a 2.....	Veterinary	5
Veterinary Materia Medica, a 3.....	Pharmacy	10

## Agronomy Group.

Soils, a & b 5.....	Agriculture	5
Farm Crops, a & b 5.....	Agriculture	6

## SENIOR YEAR.

## FIRST SEMESTER—

## Animal Husbandry Group.

Political Economy, a 3	History	11
Geology, a 5	Geology	1
Veterinary Medicine, a 5	Veterinary	6
Stock Feeding, a 2	Agriculture	7
Dairying, a 3	Agriculture	9

## Horticulture Group.

Political Economy, a 3	History	11
Geology, a 5	Geology	1
Advanced Botany, a 1, b 4	Botany	3
Soils, a & b 5	Agriculture	4

## Veterinary Group.

Political Economy, a 3	History	11
Histology, a & b 5	Zoology	6
Veterinary Medicine, a 5	Veterinary	6
Veterinary Anatomy, a & b 5	Veterinary	3

## Agronomy Group.

Political Economy, a 3	History	11
Geology, a 5	Geology	1
Advanced Botany, a 1, b 4	Botany	3
Entomology, a 2	Zoology	10
Stock Feeding, a 2	Agriculture	7
Farm Crops, a 1	Agriculture	10

## SECOND SEMESTER—

## Animal Husbandry Group.

Sociology, a 3	History	12
Veterinary Medicine, a 5	Veterinary	7
Stock Feeding, a 3	Agriculture	8
Farm Mechanics, a 2	Agriculture	12
Farm Management, a 3	Agriculture	13
Forestry, a 3	Horticulture	4

## Horticulture Group.

Sociology, a 3	History	12
Advanced Botany, a 2, b 3	Botany	4
Soils, a & b 5	Agriculture	5
Farm Mechanics, a 2	Agriculture	12
Landscape Gardening, a 1, b 1	Horticulture	5

## Veterinary Group.

Sociology, a 3.....	History	12
Histclogy, a & b 5.....	Zeclogy	7
Veterinary Medicine, a 5.....	Veterinary	7
Veterinary Anatomy, a & b 5.....	Veterinary	4

## Agronomy Group.

Sociology, a 3.....	History	12
Advanced Botany, a 2, b 3.....	Botany	4
Farm Management, a 3.....	Agriculture	13
Farm Mechanics, a 2.....	Agriculture	12
Entomclogy, a 2.....	Zeclogy	11
Farm Crops, a 3.....	Agriculture	11

## HOME ECONOMICS.

## FRESHMAN YEAR.

## FIRST SEMESTER—

Advanced Rhetoric, a 4.....	English	7
Food and Dietetics, a 5.....	Home Economics	1
Elementary Chemistry, a & b 5.....	Chemistry	1
Physical Culture, 2.....		
Elective, a 4.....		
French, a 4.....	French	1
German, a 4.....	German	1
Latin, a 4.....	Latin	5

## SECOND SEMESTER—

Advanced Rhetoric, a 4.....	English	8
Sewing, b 3.....	Domestic Art	3
Elementary Chemistry, a & b 5.....	Chemistry	2
Theory of Design, a 2.....	Art	3
Physical Culture, 2.....		
Elective, a 4.....		
French, a 4.....	French	2
German, a 4.....	German	2
Latin, a 4.....	Latin	6

## SOPHOMORE YEAR.

## FIRST SEMESTER—

Chaucer and History English Language, a 4.....	English	9
Quantitative Chemistry, a & b 5.....	Chemistry	3
General Botany, a 2, b 3.....	Botany	1
Physical Culture, 2.....		
Elective, a 4.....		
French, a 4.....	French	3
German, a 4.....	German	3
Latin, a 4.....	Latin	7



## SECOND SEMESTER—

The Elizabethan Drama, a 4.....	English	10
Chemistry of Foods, a & b 5.....	Chemistry	4
General Botany, a 2, b 3.....	Botany	2
Physical Culture, 2.....		
Elective, a 4.....		
French, a 4.....	French	4
German, a 4.....	German	4
Latin, a 4.....	Latin	8

## JUNIOR YEAR.

## FIRST SEMESTER—

Structure and Style, a 2.....	English	11
History, Medieval, a 3.....	History	7
General Zoology and Physiology, a 2, b 3.....	Zoology	2
Bacteriology, a & b 5.....	Veterinary	8
Psychology, a 3.....	Philosophy	1

## SECOND SEMESTER—

Structure and Style, a 2.....	English	12
History, Modern, a 3.....	History	8
Ethics, a 3.....	Philosophy	2
General Zoology and Physiology, a 2, b 3.....	Zoology	3
Household Sanitation and General Hygiene, a 3.....	Home Economics	2
Clothing and Shelter, a 2.....	Home Economics	3

## SENIOR YEAR.

## FIRST SEMESTER—

Political Economy, a 3.....	History	11
Art History, a 2.....	Art	6
Household Economy, a 2.....	Home Economics	4
Home Nursing and Invalid Cookery, a 3.....	Home Economics	5
Foods, b 4.....	Home Economics	6
Elective, a 3.....		
English Literature from 1625 to 1800, a 3.....	English	13
American History (1783-1829), a 3.....	History	9
Nineteenth Century History, a 2.....	History	15
The Civil War and Reconstruction Era, a 2.....	History	17
French, a 3.....	French	5
German, a 3.....	German	5
Latin, a 3.....	Latin	9
History of Education, a 3.....	Philosophy	3
History of Music, a 3.....	Music	
Theory of Interpretation and Musical Forms, a 2.....	Music	

## SECOND SEMESTER—

Sociology, a 3.....	History	12
---------------------	---------	----

Astronomy, a 4.....	Mathematics	15
Art History, a 2.....	Art	7
Original Investigation, b 2.....	Home Economics	8
Elective, a 5.....		
Nineteenth Century Poetry, a 3.....	English	14
American History (1829-1865), a 3.....	History	10
Nineteenth Century History, a 2.....	History	16
The Civil War and Reconstruction Era, a 2.....	History	18
French, a 3.....	French	6
German, a 3.....	German	6
Latin, a 3.....	Latin	10
Methods of Teaching, a 3.....	Philosophy	4
History of Music, a 3.....	Music	
Theory of Interpretation and Musical Forms, a 2.....	Music	
Teaching of Home Economics, a 2.....	Home Economics	7

## MECHANICAL ENGINEERING.

### FRESHMAN YEAR.

#### FIRST SEMESTER—

Advanced Rhetoric, a 4.....	English	7
Solid Geometry, a 3.....	Mathematics	7
Plane Trigonometry, a 2.....	Mathematics	9
Elementary Chemistry, a & b 5.....	Chemistry	1
Mechanical Drawing, b 5.....	Mechanical Engineering	5
Military, 3.....		

#### SECOND SEMESTER—

Advanced Rhetoric, a 4.....	English	8
Advanced Algebra, a 3.....	Mathematics	8
Plane and Spherical Trigonometry, a 2.....	Mathematics	10
Elementary Chemistry, a & b 5.....	Chemistry	2
Machine Shop, b 3.....	Mechanical Engineering	3
Surveying, b 2.....	Civil Engineering	2
Military, 3.....		

### SOPHOMORE YEAR.

#### FIRST SEMESTER—

Analytic Geometry and Calculus, a 5.....	Mathematics	11
General Physics, a 3, b 2.....	Physics	3
French, a 4.....	French	1
Machine Shop, b 5.....	Mechanical Engineering	4
Military, 3.....		

#### SECOND SEMESTER—

Calculus, a 5.....	Mathematics	12
General Physics, a 3, b 2.....	Physics	4
French, a 4.....	French	2

---

Descriptive Geometry, a 1, b 2.....	Mechanical Engineering	6
Machine Design, b 2.....	Mechanical Engineering	7
Military, 3.....		

## JUNIOR YEAR.

## FIRST SEMESTER—

Electricity and Magnetism, a 3, b 1.....	Electrical Engineering	1
Analytic Mechanics, a 5.....	Mathematics	13
Elements of Mechanism, a 3.....	Mechanical Engineering	10
Machine Design, b 5.....	Mechanical Engineering	8
Structure and Style, a 2.....	English	11

## SECOND SEMESTER—

Steam Engines, a 3.....	Mechanical Engineering	12
Dynamo Electric Machinery, a 3, b 2.....	Electrical Engineering	3
Kinematics, b 2.....	Mechanical Engineering	9
Mechanics of Materials, a 3.....	Mechanical Engineering	16
Gas and Oil Engines, a 2.....	Mechanical Engineering	11
Structure and Style, a 2.....	English	12

## SENIOR YEAR.

## FIRST SEMESTER—

Political Economy, a 3.....	History	11
Steam Boilers, a 2.....	Mechanical Engineering	13
Experimental Engineering, b 2.....	Mechanical Engineering	17
Engineering Design, b 5.....	Mechanical Engineering	19
Hydraulics, a 3.....	Civil Engineering	5
Specifications and Contracts, a 2.....	Civil Engineering	12

## SECOND SEMESTER—

General Astronomy, a 4.....	Mathematics	15
Strains in Framed Structures, a 3.....	Mechanical Engineering	15
Experimental Engineering, b 2.....	Mechanical Engineering	18
Engineering Design, b 3.....	Mechanical Engineering	20
Masonry and Foundations, a 2.....	Civil Engineering	9
Power Transmission and Measurement, a 2.....	Mechanical Engineering	23

## ELECTRICAL ENGINEERING.

## FRESHMAN YEAR.

## FIRST SEMESTER—

Advanced Rhetoric, a 4.....	English	7
Solid Geometry, a 3.....	Mathematics	7
Plane Trigonometry, a 2.....	Mathematics	9
Elementary Chemistry, a & b 5.....	Chemistry	1
Mechanical Drawing, b 5.....	Mechanical Engineering	5
Military, 3.....		

## SECOND SEMESTER—

Advanced Rhetoric, a 4.....	English	8
Advanced Algebra, a 3.....	Mathematics	8
Plane and Spherical Trigonometry, a 2.....	Mathematics	10
Elementary Chemistry, a & b 5.....	Chemistry	2
Machine Shop, b 3.....	Mechanical Engineering	3
Surveying, b 2.....	Civil Engineering	2
Military, 3.....		

## SOPHOMORE YEAR.

## FIRST SEMESTER—

Analytic Geometry and Calculus, a 5.....	Mathematics	11
General Physics, a 3, b 2.....	Physics	3
French, a 4.....	French	1
Machine Shop, b 5.....	Mechanical Engineering	4
Military, 3.....		

## SECOND SEMESTER—

Calculus, a 5.....	Mathematics	12
General Physics, a 3, b 2.....	Physics	4
French, a 4.....	French	2
Descriptive Geometry, a 1, b 2.....	Mechanical Engineering	6
Machine Design, b 2.....	Mechanical Engineering	7
Military, 3.....		

## JUNIOR YEAR.

## FIRST SEMESTER—

Analytic Mechanics, a 5.....	Mathematics	13
Electricity and Magnetism, a 3, b 1.....	Electrical Engineering	1
Elements of Mechanism, a 3.....	Mechanical Engineering	10
Machine Design, b 4.....	Mechanical Engineering	8
Telephone Engineering, a 2.....	Electrical Engineering	2
Structure and Style, a 2.....	English	11

## SECOND SEMESTER—

Steam Engines, a 3.....	Mechanical Engineering	12
Electro-Chemistry, a 3, b 1.....	Chemistry	8
Dynamo Electric Machinery, a 3, b 2.....	Electrical Engineering	3
Kinematics, b 2.....	Mechanical Engineering	9
Mechanics of Materials, a 3.....	Mechanical Engineering	16
Structure and Style, a 2.....	English	12

## SENIOR YEAR.

## FIRST SEMESTER—

Political Economy, a 3.....	History	11
Steam Boilers, a 2.....	Mechanical Engineering	13
Experimental Engineering, b 2.....	Mechanical Engineering	17



---

Alternating Currents, a 3, b 2.....	Electrical Engineering	4
Dynamo Design, b 3.....	Electrical Engineering	5
Hydraulics, a 3.....	Civil Engineering	5
Specifications and Contracts, a 2.....	Civil Engineering	12

## SECOND SEMESTER—

General Astronomy, a 4.....	Mathematics	15
Electric Light and Power Distribution, a 3, b 2.....	Electrical Engineering	6
Experimental Engineering, b 3.....	Mechanical Engineering	18
Gas and Oil Engines, a 2.....	Mechanical Engineering	11
Masonry and Foundations, a 2.....	Civil Engineering	9

## CIVIL ENGINEERING.

## FRESHMAN YEAR.

## FIRST SEMESTER—

Advanced Rhetoric, a 4.....	English	7
Solid Geometry, a 3.....	Mathematics	7
Plane Trigonometry, a 2.....	Mathematics	9
Elementary Chemistry, a & b 5.....	Chemistry	1
Mechanical Drawing, b 5.....	Mechanical Engineering	5
Military, 3.....		

## SECOND SEMESTER—

Advanced Rhetoric, a 4.....	English	8
Advanced Algebra, a 3.....	Mathematics	8
Plane and Spherical Trigonometry, a 2.....	Mathematics	10
Elementary Chemistry, a & b 5.....	Chemistry	2
Surveying, a & b 5.....	Civil Engineering	1
Military, 3.....		

## SOPHOMORE YEAR.

## FIRST SEMESTER—

Analytic Geometry and Calculus, a 5.....	Mathematics	11
General Physics, a 3, b 2.....	Physics	3
French, a 4.....	French	1
Surveying, a 2, b 3.....	Civil Engineering	3
Military, 3.....		

## SECOND SEMESTER—

Descriptive Geometry, a 1, b 2.....	Mechanical Engineering	6
Calculus, a 5.....	Mathematics	12
General Physics, a 3, b 2.....	Physics	4
French, a 4.....	French	2
Topographical Surveying, a & b 2.....	Civil Engineering	4
Military, 3.....		

## JUNIOR YEAR.

## FIRST SEMESTER—

Analytic Mechanics, a 5.....	Mathematics	13
Elements of Mechanism, a 5.....	Mechanical Engineering	10
Hydraulics, a 3.....	Civil Engineering	5
Machine Design, a 5.....	Mechanical Engineering	8
Structure and Style, a 2.....	English	11

## SECOND SEMESTER—

Geodesy, a & b 3.....	Civil Engineering	6
Mechanics of Materials, a 3.....	Mechanical Engineering	16
Water Supply, a 2.....	Civil Engineering	7
Irrigation, a 2.....	Civil Engineering	8
Masonry and Foundations, a 2.....	Civil Engineering	9
Structure and Style, a 2.....	English	12
Elective, 5.....		

## SENIOR YEAR.

## FIRST SEMESTER—

Political Economy, a 3.....	History	11
Sewerage, a 2.....	Civil Engineering	10
Roads and Pavements, a 2.....	Civil Engineering	11
Electricity and Magnetism, a 3, b 1.....	Electrical Engineering	1
Experimental Engineering, b 2.....	Mechanical Engineering	17
Geology, a 5.....	Geology	1
Specifications and Contracts, a 2.....	Civil Engineering	12

## SECOND SEMESTER—

Experimental Engineering, b 3.....	Mechanical Engineering	18
General Astronomy, a 3.....	Mathematics	15
Strains in Framed Structures, a 3.....	Mechanical Engineering	15
Railroad Engineering, a 1, b 2.....	Civil Engineering	13
Dam and Reservoir Design, b 2.....	Civil Engineering	14
Elective, 5.....		

FIFTH YEAR SUBJECTS FOR ENGINEERING DEGREES—  
MECHANICAL ENGINEERING.

## FIRST SEMESTER—

Alternating Currents, a 3, b 2.....	Electrical Engineering	4
Statics, a 2.....	Mechanical Engineering	24
Structural Design, b 3.....	Mechanical Engineering	21
*Elective, 5.....		
Thesis, a 2.....	Mechanical Engineering	26

## SECOND SEMESTER—

Thermodynamics, a 3.....	Mechanical Engineering	14
--------------------------	------------------------	----

Heating and Ventilation, a 2.....	Mechanical Engineering	25
Railroad Engineering, a 1, b 2.....	Civil Engineering	13
Structural Engineering, b 2.....	Mechanical Engineering	22
*Elective, 5.....		
Thesis, a & b 3.....	Mechanical Engineering	27

## ELECTRICAL ENGINEERING

### FIRST SEMESTER—

Polyphase Currents, a 3, b 2.....	Electrical Engineering	7
Power Transmission, a 2.....	Mechanical Engineering	23
Electrical Design, b 3.....	Electrical Engineering	8
*Elective, a & b 5.....		
Thesis, a 2.....	Electrical Engineering	11

### SECOND SEMESTER—

Design of Power Stations, a 3, b 2.....	Electrical Engineering	9
Installation and Testing of Power Plants, a 2, b 1.....	Electrical Engineering	10
Railroad Engineering, a 1, b 2.....	Civil Engineering	13
Thesis, a 3.....	Electrical Engineering	12
*Elective, a & b 5.....		

## CIVIL ENGINEERING

### FIRST SEMESTER—

Structural Design, a & b 5.....	Civil Engineering	15
Hydraulic Motors, a 3.....	Civil Engineering	17
Reinforced Concrete, a 3.....	Civil Engineering	18
*Elective, 5.....		
Thesis, a 2.....	Civil Engineering	19

### SECOND SEMESTER—

Structural Design, b 3.....	Civil Engineering	16
Steam Engines, a 3.....	Mechanical Engineering	12
Thermodynamics, a 3.....	Mechanical Engineering	14
Dynamo Electric Machinery, a 3, b 2.....	Electrical Engineering	3
*Elective, 2.....		
Thesis, a & b 3.....	Civil Engineering	20

\*All Electives must be taken from one of the Engineering Departments.

## GENERAL SCIENCE

### FRESHMAN YEAR.

#### FIRST SEMESTER—

Advanced Rhetoric, a 4.....	English	7
Elementary Chemistry, a & b 5.....	Chemistry	1
Military, 3, or Physical Culture, 2.....		

Elective, a 9.....	
French, a 4, or —.....	French 1
German, a 4, or —.....	German 1
Latin, a 4.....	Latin 5
Food and Dietetics, a 5, or.....	Home Economics 1
Solid Geometry, a 3, and.....	Mathematics 7
Plane Trigonometry, a 2.....	Mathematics 9
One, and only one, language must be elected.	

## SECOND SEMESTER—

Advanced Rhetoric, a 4.....	English 8
Elementary Chemistry, a & b 5.....	Chemistry 2
Military, 3, or Physical Culture, 2.....	
Elective, a & b 9.....	
French, a 4, or .....	French 2
German, a 4, or .....	German 2
Latin, a 4.....	Latin 6
Household Sanitation and General Hygiene, a 3, and .....	
.....	Home Economics 2
Clothing and Shelter, a 2.....	Home Economics 3
Or two of the three following subjects—	
Surveying, b 2.....	Civil Engineering 2
Plane and Spherical Trigonometry, a 2.....	Mathematics 10
Advanced Algebra, a 3.....	Mathematics 8
One, and only one, language must be elected.	

## SOPHOMORE YEAR.

## FIRST SEMESTER—

Chaucer and History of English Language, a 4.....	English 9
Military, 3.....	
Elective, a & b 14.....	
French, a 4, or .....	French 3
German, a 4, or .....	German 3
Latin, a 4.....	Latin 7
General Zoology and Physiology, a 2, b 3.....	Zoology 2
General Botany, a 2, b 3.....	Botany 1
Analytic Geometry and Calculus, a 5.....	Mathematics 11
Quantitative Chemistry, a & b 5.....	Chemistry 3
Elocution, a 5.....	Elocution 1
General Physics, a 3, b 2.....	Physics 3
One, and only one, language must be elected.	

## SECOND SEMESTER—

The Elizabethan Drama, a 4.....	English 10
Military, 3.....	
Elective, a & b 14.....	
French, a 4, or .....	French 4



German, a 4, or .....	German	4
Latin, a 4.....	Latin	8
General Zoology and Physiology, a 2, b 3.....	Zoology	3
General Botany, a 2, b 3.....	Botany	2
Calculus, a 5.....	Mathematics	12
Volumetric Analysis and Drug Assaying, a & b 5.....	Pharmacy	9
Elocution, a 5.....	Elocution	2
General Physics, a 3, b 2.....	Physics	4
One, and only one, language must be elected.		

## JUNIOR YEAR.

## FIRST SEMESTER—

Structure and Style, a 2.....	English	11
History, Medieval, a 3.....	History	7
Psychology, a 3.....	Philosophy	1
General Physics, a 3, b 2.....	Physics	3
Elective, a & b 3.....		
Elocution, a 3.....	Elocution	3
Mechanical Drawing, b 3.....	Mechanical Engineering	5
American History (1783-1829), a 3.....	History	9
English Literature from 1625 to 1800, a 3.....	English	13
French, a 3.....	French	5
German, a 3.....	German	5
Latin, a 3.....	Latin	9
Histology, a & b 5.....	Zoology	6
Industrial Chemistry, a 3.....	Chemistry	7
Advanced Physics, a 4, b 1.....	Physics	5

## SECOND SEMESTER—

Structure and Style, a 2.....	English	12
History, Modern, a 3.....	History	8
Ethics, a 3.....	Philosophy	2
General Physics, a 3, b 2.....	Physics	4
Elective, a & b 3.....		
Elocution, a 3.....	Elocution	4
Architectural Drawing, b 3.....	Mechanical Engineering	5
American History (1829-1865), a 3.....	History	10
Nineteenth Century Poetry, a 3.....	English	14
French, a 3.....	French	6
German, a 3.....	German	6
Latin, a 3.....	Latin	10
Histology, a & b 5.....	Zoology	7
Agricultural Chemistry, a 3.....	Chemistry	6
Genetics, a 2.....	Horticulture	2
Advanced Physics a 4, b 1.....	Physics	6

## SENIOR YEAR

## FIRST SEMESTER—

Political Economy, a 3.....	History	11
Geology, a 5.....	Geology	1
Elective, a & b 9.....		
Advanced Physics, a 4, b 1.....	Physics	5
Architectural Design, b 5.....	Mechanical Engineering	5
Government and Politics of the United States, a 3.....	History	13
Nineteenth Century History, a 2.....	History	15
The Civil War and Reconstruction Era, a 2.....	History	17
Nineteenth Century Prose, a 5.....	English	15
Materia Medica, a 5.....	Pharmacy	2
Analytic Mechanics, a 5.....	Mathematics	13
Art History, a 2.....	Art	6
Theory and Practice of Design, a & b 5.....	Art	4
History of Education, a 3.....	Philosophy	3
History of Music, a 3.....	Music	
Theory of Interpretation and Musical Forms, a 2.....	Music	
Comparative Anatomy of Vertebrates, a & b 5.....	Zoology	8
Bacteriology, a & b 5.....	Veterinary	8
Agricultural Analysis, a & b 5.....	Chemistry	5
Advanced Botany, a 1, b 4.....	Botany	3
Heat, a 3, b 1.....	Physics	7

## SECOND SEMESTER—

Sociology, a 3.....	History	12
General Astronomy, a 4.....	Mathematics	15
Elective, a & b 9.....		
Advanced Physics, a 4, b 1.....	Physics	6
Perspective, b 5.....	Mechanical Engineering	5 c
Economic Problems, a 3.....	History	14
Nineteenth Century History, a 2.....	History	16
The Civil War and Reconstruction Era, a 2.....	History	18
Nineteenth Century Prose, a 5.....	English	16
Materia Medica, a 5.....	Pharmacy	3
Analytic Mechanics, a 5.....	Mathematics	14
Art History, a 2.....	Art	7
Theory and Practice of Design, a & b 5.....	Art	5
Methods of Teaching, a 3.....	Philosophy	4
History of Music, a 3.....	Music	
Theory of Interpretation and Musical Forms, a 2.....	Music	
Comparative Anatomy of Vertebrates, a & b 5.....	Zoology	9
Chemistry of Foods, a & b 5.....	Chemistry	4
Advanced Botany, a 2, b 3.....	Botany	4
Light, a 3, b 1.....	Physics	8

## PHARMACY

### FIRST YEAR.

#### FIRST SEMESTER—

Elementary Chemistry, a & b 5.....	Chemistry	1
General Botany, a 2, b 3.....	Botany	1
Anatomical Methods, a 3, b 2.....	Zoology	4
Pharmacy Latin, a 5.....	Pharmacy	1

#### SECOND SEMESTER—

Elementary Chemistry, a & b 5.....	Chemistry	2
General Botany, a 2, b 3.....	Botany	2
Anatomical Methods and Physiology, a 3, b 2.....	Zoology	5
Pharmacognosy, a & b 5.....	Botany	5

### SECOND YEAR.

#### FIRST SEMESTER—

Materia Medica, a 5.....	Pharmacy	2
Pharmacy, a 5.....	Pharmacy	4
Quantitative Chemistry, a & b 5.....	Chemistry	3
Pharmacy Laboratory, b 3.....	Pharmacy	5
Pharmaceutical Arithmetic, a 2.....	Pharmacy	6

#### SECOND SEMESTER—

Materia Medica, a 5.....	Pharmacy	3
Pharmacy, a 5.....	Pharmacy	7
Volumetric Analysis and Drug Assaying, a & b 5.....	Pharmacy	9
Pharmacy Laboratory, b 5.....	Pharmacy	8

## DEPARTMENTS AND WORK

---

### The Agricultural Experiment Station

JAMES W. WILSON, Director.

Under the provisions of the Hatch Act of March 2, 1887, and the Adams Act of March 20, 1906, the state receives during the fiscal year of 1907-08 \$24,000 from the treasury of the United States for the maintenance of an Experiment Station. By an act of the legislature this institution was made a part of the South Dakota Agricultural College. Its object is to conduct investigations along agricultural lines, publish the results in bulletin form and distribute them to the residents of the state for their information and benefit. It consists of five divisions, namely, Agriculture, Horticulture, Chemistry, Botany and Entomology, and Veterinary.

Each of these divisions is in charge of an expert who is also the professor of the same subject in the College.

About sixty acres of the College Farm are set aside for experiments in crop rotations and testing varieties of grains.

Another sixty acres are utilized for experiments along horticultural lines, where trees, shrubs and vines are grown in profusion. Co-operation with the United States Department of Agriculture in the adaptation of grains, grasses, forage plants, fruits, trees, shrubs and vegetables for the Northwest, is being carried on, and as a result many valuable varieties have been introduced which probably would not otherwise have reached us.

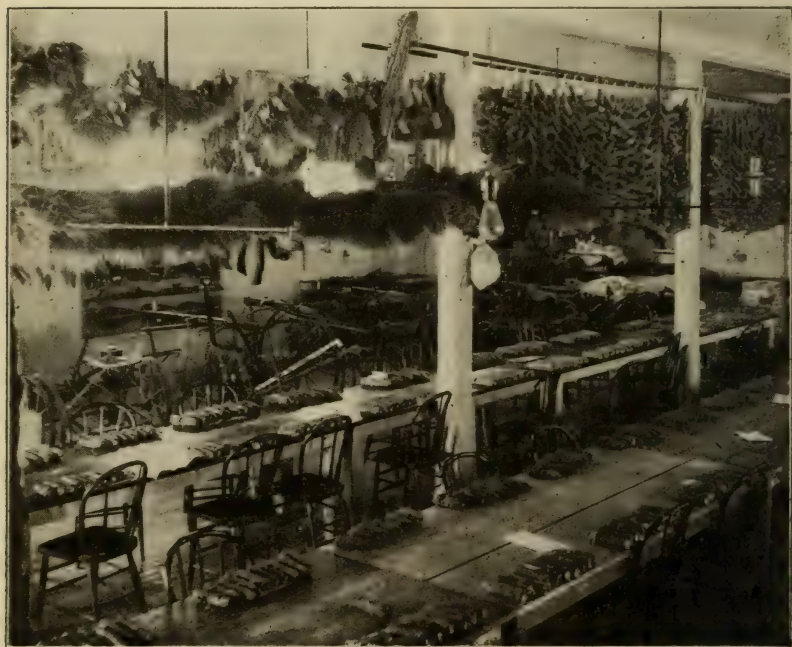
Each division is provided with the proper facilities, by the state, to conduct investigations, and at least four bulletins are published annually, which are free to the residents of the state. Queries pertaining to the various agricultural interests are answered promptly. The regular bulletin mailing list of the Station numbers over 12,000 names.

In addition to the above, the state legislature of 1907 appropriated ten thousand dollars for the Forage Testing Station at Highmore, which institution is a sub-station of this experiment station. Eight thousand dollars of this money is to be



used for the erection of buildings and two thousand for maintenance. The legislature also passed a law for the establishment of three other sub-stations in the western part of the state and set aside the revenue derived from 25,000 acres of land in the state for the maintenance of such sub-stations.

All communications to this department should be addressed to the Director.



*Agronomy Room.*

### Department of Agriculture

PROFESSOR WILSON, MR. SKINNER AND MR. COLE.

This department includes the Farm, Dairy and Animal Husbandry divisions.

The instruction given in each division is made as practical as possible, to fit the student better for solving the every day problems of farm life. New grains and forage crops are grown

under field conditions and are used in feeding experiments for the economical production of beef, mutton, pork and dairy products.

The College flocks and herds include representatives of fifteen of the leading breeds of domestic animals. Practical work is given daily in score card practice to enable the student to distinguish between the poor and the good, and the good and the fancy kinds of animals, an acquirement necessary for the successful handling of live stock.

In the dairy the student is taught the operation of dairy machinery, and the best methods of making fancy butter and cheese by actually doing the work. A representative herd of dairy cows is kept to furnish milk for the dairy and to afford the student an opportunity to make comparisons as to performance and individual characteristics.

The following is the work offered:

- 1 Stock Judging.
  - a. Instruction in selecting animals for breeding purposes, detection of unsoundness and blemishes, proper conformation, and the use of the score card.  
Judging Live Stock, Craig.
- 2 Breeds of Live Stock and Stock Breeding.  
Prerequisite Course 1.
  - a. Study of the various breeds, their origination, characteristics, improvement, adaptability to different climates, and the best kind for special purposes.  
Types and Breeds of Farm Animals, Plumb; and lectures.
- 3 Stock Judging.  
Prerequisite Course 2.

A continuation of Course 1. Particular attention is given to show yard work.  
Lectures and notes.
- 4 Soils.  
Prerequisite, Physics 3.
  - a. The origin and formation of soils, physical properties of the soil, supply of food to the growing plant, soil moisture, soil temperature, tillage, nutrition, wells, and irrigation.
  - b. Mechanical analysis of soils; organic matter, moisture and specific gravity demonstrations; capillarity and water holding capacity of various soils; measure of the flow of water and the passage of air through soils; the effect of mulching and tillage upon the conservation of moisture.

Soils, Hilgard; Lectures, References, Notebook.

5 Soils.

A continuation of course 4. Taking up chemistry of soils and a study of soils in relation to their natural vegetation.

Soils, Hilgard; Lectures, References, Notebook.

6 Farm Crops.

a, The classification, improvement, culture, harvesting, uses, history and geographical distribution of crops.

b, Laboratory work in grain grading, cleaning, treating, and corn judging. This is a general survey of all farm crops and is taken by all agricultural students.

Cereals in America, Hunt; Lectures, References, Notebooks.

7 Stock Feeding.

Prerequisite Course 2.

a, Laws of nutrition, expenditure of energy, balanced rations, composition of feeding stuffs. A comparison of the results of feeding experiments at the various stations, finishing for the market and the economical handling of live stock under South Dakota conditions.

W. A. Henry's, Feeds and Feeding; and References.

8 Stock Feeding.

a, Continuation of Course 7.

9 Dairying.

a, Operating dairy machinery; practical laboratory work in butter and cheese making and testing dairy products.

10 Farm Crops.

Prerequisite Courses 5 and 6.

This course will be suited to the needs of the class.

11 Farm Crops.

a, Advanced work for students specializing in Agronomy.

12 Farm Mechanics.

Prerequisite Course 4 and Physics 3.

a, Principles of draft, roads, farm motors, horse power, engines, wind-mills, farm machinery, friction pumps. Laboratory work with models and apparatus for measuring draft, examination and tests of farm machinery and implements.

Physics of Agriculture, King; Lectures, Notebooks.

13 Farm Management.

a, The selection, laying out and general management of farms, farm buildings, selection and rotation of crops, markets, general summing up and correlation of the work in Agronomy.

A text to be announced later, supplemented with lectures and references.

## SPECIAL SIX WEEKS' COURSE IN AGRICULTURE

From (Jan. 6 to Feb. 14, 1908)

This course is offered to accommodate those, young and old, who cannot avail themselves of the opportunities offered in the long courses. It will cover a period of six weeks and there will be no entrance examination required. The work will consist of lectures, recitations, demonstrations and practical laboratory exercises in the following subjects: Stock judging, poultry



*Lecture on Poultry.*

culture, farm methods and implements, crop rotation, corn judging, seed selection and breeding, diseases of domestic animals and their treatment, insects injurious to farm crops and the elements of horticulture, including the cultivation and propagation of vegetables, fruits, trees and shrubs.



## THE SPECIAL BUTTER-MAKERS' COURSE

(From January 6 to April 6, 1908)

The development of the dairy interest throughout the state has been very rapid during the past few years, calling for a larger number of technical and experienced operators of factories, especially expert butter-makers, and men who are competent to advise and direct dairy farmers in the care and management of dairy herds, care and management of milk, etc.

This course is designed to fit young men for creamery operators and managers.

The work embraces the care of dairy cows, stables, milk and dairy utensils; the ripening of cream, pasteurization and sterilization of milk; the discussion and practice of ripening cream with pure and natural culture, together with all the latest practical methods of successfully operating a creamery.

The following work is offered:

General Agriculture and Care of Dairy Cows, a 5.....	8:30
Dairy Lectures, a 5.....	9:30
Dairy Arithmetic, a 3.....	10:30
Dairy Engineering, a 2.....	10:30
Lectures in Botany, Entomology, Horticulture and Zoology, a 3, optional.....	3:15
Book Keeping, a 3.....	1:15
Practical Butter-Making, b 5.....	2:15
Bacteriology, a 2.....	1:15

On successfully completing the term's work offered, the student is entitled to a certificate of efficiency as helper in a creamery, and upon completing a full season's work as helper satisfactorily to the butter-maker and manager, with their recommendation, he may receive a certificate of competency to operate a creamery.

## COURSE IN DOMESTIC DAIRYING

(From September 16 to December 20, 1907)

This course is offered to special students (young men and women) who desire to become proficient in the art of home dairying, how to make butter and cheese on the farm or in private dairies, the care and management of the same, etc. Completion

of this work entitles the student to a certificate of competency to manage a dairy farm or private dairy. The following work in the various courses is offered:

Care and Management of Dairy Cows, a 5.....	8:30
Testing Dairy Products, a 2, b 3.....	9:30
Practical laboratory work in butter and cheese making, as applied to home and farm dairying, b 5.....	1:15
Care and management of hand separators and other modern dairy apparatus, b 5.....	3:15
Dairy Bacteriology, a 2.....	3:15

#### SPECIAL CHEESE-MAKERS' COURSE

(Special Work in Dairy Science, April 6 to June 10, 1908)

Recently there has developed a desire on the part of the dairy farmer in some localities to engage in the manufacture of cheese. A SPECIAL CHEESE-MAKING COURSE IS OFFERED embracing the manufacture of Young America's, Edam, Gouda, Brick and other styles of fancy cheese and the regular American Cheddar factory and flats.

The following work is offered:

Dairy Lectures, a 5.....	8:30
Dairy Arithmetic, a 3.....	9:30
Dairy Engineering, a 2.....	9:30
Book-Keeping, a 3.....	10:30
Practical Cheese-Making, b 5.....	1:15
Dairy Bacteriology, a 2.....	1:15

On completion of the work the student will receive a certificate of proficiency as assistant or helper in a cheese factory under a competent and practical cheese-maker, but after obtaining a position as such, the student will be required to report to the dairy instructor every month. Upon completing a full season's work as helper satisfactorily to the cheese-maker and manager, with their recommendation he may receive a certificate of efficiency to operate a cheese factory.

#### Department of Horticulture and Forestry

PROFESSOR HANSEN, MR. HARALSON, MR. STOLTENBERG

In this department the work is given from two standpoints. In one, especially in the course in Genetics, emphasis is placed upon the general philosophy of the subject as being essential to

a general education. The claim is made that some of the principles of horticulture and forestry are essential to any well rounded education and to the best preparation for citizenship. The second standpoint is that of students intending to make a life work of horticulture or forestry, either as a business or a profession. Throughout the course full use is made of the student's attainments in the various sciences underlying these subjects. The variation of plants and the principles and



*Green House.*

methods of their development under the hand of man are considered, as well as their propagation and cultivation.

Field and laboratory exercises emphasize the lectures and recitations of the class room. The habit of independent investigation and close observation is encouraged by requiring written reports of outdoor excursions or demonstrations. Excellent facilities for practical illustration are afforded by the

ninety acres of experiment station horticultural grounds and college campus. In this domain are included orchards, forestry plantations, nurseries, vegetable gardens, small fruit plantations, flower borders and a collection of ornamental plants. Special attention is paid to the breeding of hardy fruits adapted to prairie conditions and the work in this line is now second to none in extent. The department greenhouse consists of two sections, one for general floriculture work and the other for fruit-breeding experiments. In addition, the horticultural buildings contain class rooms, laboratory, grafting and potting rooms and storage cellars.

The commercial nursery course is intended as a short winter course for those who desire to engage in the business of growing plants and trees for sale, especially those adapted to prairie conditions.

Special stress is laid upon practical work in the grafting room. No examination is required for entrance to this short course.

The following work is offered:

1 Pomology.

a, Principles of fruit culture with special reference to prairie conditions. Exercises in the identification and description of fruits with methods of cultivation and propagation.

Lectures; American Horticultural Manual, Bailey's Principles of Fruit Culture.

2 Genetics.

a, This course is especially recommended to students of the sciences relating to plants and animals, and also to students of general history and sociology. The evolution of plants and animals under the hand of man and in the state of nature. The philosophy of artificial evolution or the modification and amelioration of plants and animals by environment, selection and hybridization. The relation of Genetics to Sociology.

Recent theories and work in plant-breeding. Lectures; Darwin's Animals and Plants under Domestication; De Vries' Species and Varieties, their Origin by Mutation; Bailey's Plant-Breeding and Survival of the Unlike; Reports of International Conferences on Genetics, and Reports of the U. S. Department of Agriculture.

No previous knowledge of horticulture is required for admission to this course.

3 Floriculture and Market Gardening.

The commercial and amateur cultivation of flowers and vegetables under glass and in the open air.

Lectures, demonstrations and text-book work.



## 4 Forestry.

a. Principles of forestry, the influence of forests on climate; timber planting on the prairies; European forestry methods as modified by prairie conditions; shelter belts; the propagation, cultivation, characteristics and use of forest trees.

Lectures and demonstrations; Pinchot's Primer of Forestry; Green's Forestry in Minnesota; Proceedings of the American Forest Congress.

## 5 Landscape Gardening.

The philosophy of the Beautiful in its various modes of expression. Gardening as one of the fine arts; historic development of the ancient or geometric and the modern or natural styles; the best ornamental trees, shrubs, plants and hedges. Special attention is paid to the development of originality in the planning and laying out of country and city home grounds, parks and school grounds.

Lectures; Text-books, and References.

## 6 Floriculture and Home Gardening.

a. A course in home gardening for the students in the short winter course in Domestic Economy and Agriculture.

Text-books, Practical Demonstrations and Exercises.

## 7 Nursery Handicraft.

b. Practical exercises in tree, shrub and plant propagation for students in the short commercial nursery course.

---

### Short Course in Horticulture

From (January 6 to April 6)

Special commercial Nursery Course. Lectures and practical work in commercial propagation and nursery management of fruit trees and small fruits, forest trees, ornamental trees, shrubs and plants, grafting, budding, pruning, cutting scions, packing grafts, making cuttings and stratifying seeds. All of every day.

Lectures: American Horticultural Manual, Bailey's Nursery Book, Goff's Principles of Plant Culture, Green's Amateur Fruit Growing and Forestry in Minnesota.

---

### Department of Veterinary Medicine

DR. MOORE.

This department occupies a separate two-story building with a hospital in connection. The operating room is equipped with all necessary supplies and instruments for ordinary surgical operations. Free clinics are held each Saturday at which stu-

dents assist and perform operations under the direction of the instructor. The instruction offered is aimed to meet the requirements of the agricultural student as well as the special student in veterinary medicine. By a judicious selection of courses in this and other departments the equivalent of the first year's work of the Veterinary Colleges may be secured.



*Home Economy Kitchen.*

- 1-2 **Veterinary Anatomy**.—Conducted by the laboratory method with frequent quizzes. Osteology and arthrology.
- 3-4 **Veterinary Anatomy**.—Splanchnology and myology. A continuation of the preceding.  
Text, Chauveau's Comparative Anatomy of the Domesticated Animals.
- 5 **Horseshoeing and Lameness**.—The anatomy of the foot, its care, preparation, and shoeing; diseases of the organs of locomotion.
- 6-7 **Veterinary Medicine**.—Recitations, lectures, and clinics.
- 8 **Bacteriology**.—This course is designed especially to acquaint the student with laboratory methods and technique.  
**Veterinary Physiology**.—See Department of Zoology, Courses 2 and 3.

## Department of Home Economics and Domestic Art

MISS WILCOX, MISS FROMME

The work in this department is developed along two lines: the Home Economics and work in Domestic Art.

Home Economics includes the courses which have to do especially with the scientific study of the activities of the home.

Domestic Art includes the practical courses in cooking and serving.

This department stands for a better appreciation and a wider knowledge of the things that make for better homes. While the work is essentially scientific in character, the course has been planned with due regard to cultural needs. The department is very favorably located occupying an entire floor and is well equipped for the various lines of work. Chart and exhibits illustrating the chemical compositions of food are found in the class room; general reference books and magazines are found in the general library

### 1 Food and Dietetics.

The nature, nutritive constituents and relative value of foods. Typical processes of food production. Cost of food. Dieteries.

### 2 Household Sanitation and General Hygiene.

By reference and lectures the following subjects are considered: Situation of the house with regard to soil drainage and general surroundings, plumbing and heating arrangements, water supply, sanitary and unsanitary conditions in house, problems of personal and public hygiene, necessary precautions against spread of disease.

### 3 Clothing and Shelter.

Study of fabrics. Fibres used in making fabrics, their preparation and manufacture. Primitive industries, spinning and weaving. Use of fabrics in clothing and in the house. Development of modern house from primitive conditions. Modern household problems of furnishing and equipment.

### 4 Household Economy.

The aim of this course is to set forth some of the principles underlying housekeeping, including the organization of the household, chemistry of cleaning, laundry work, serving of foods and marketing.

### 5 Home Nursing and Invalid Cookery.

This course includes a study of diet for the sick, care of the sick in the home and the preparation of food for them. A few lectures are usually given by a physician.

6 Application of Heat to Food.

Food Principles, effect of heat. Household fuels and their uses. Cooking apparatus and the principles of its construction. Cooking and serving of typical foods.

7 Teaching of Home Economics.

Purpose and method of work. A consideration of courses of study, school equipment. The relation of this subject to other studies and to the school as a whole.

8 Original Investigation.

Laboratory work. Individual problems assigned for investigation



*Home Economy Sewing Room.*

### Domestic Art

For description of Courses 1 and 2, see the Preparatory Department.

3 Sewing.

Plain dress making, drafting, cutting, fitting and general dress making. Each student is required to make a shirt waist suit

Students who have had this work or its equivalent may take a course



in art needlework instead. The course will be fitted, as much as possible, to needs of the individual student.

---

### **Department of Mechanical Engineering**

PROFESSOR SOLBERG, MR. SCHAPHORST, MR. WESTCOTT

The object of the work offered is to give the students a thorough training in the theoretical principles underlying the science of mechanics and machines and at the same time to enable them to become practically familiar with some of the numerous applications of these principles which are of such inestimable value to the human race.

The instruction is both theoretical and practical. The usual method of text-book study and lectures are employed, but the student is required to put into practice, as far as possible, the instruction which he receives. Hence the work of the class-room is supplemented and practically exemplified by practice in shops. The student not only studies the theories of constructing and operating machinery, but in the drawing room he designs, and in the shops constructs and operates such machines. It is believed that those who complete this course will be able to fill responsible positions in manufacturing establishments. It is important that French be elected as the language that is required in addition to English.

The department is located in the Engineering building. The workshops are supplied with a large variety and quantity of tools. The woodshop is furnished with twenty-five sets of carpenter tools and with eight wood turning and one pattern maker's lathe, a scroll saw, a combination circular saw and a twenty-inch planer. There is also a variety of special tools for wood working.

The machine shop is furnished with a large number of engine lathes of different sizes, a universal milling machine, shaper, planer, tool grinder, drill press, emery wheels and a great variety of hand tools. The machinery is driven by a 50 H. P. Atlas Engine.

The Experimental Laboratory is equipped with a 100,000-pound Riehle Vertical screw testing machine, a 2,000-pound cement testing machine, together with steam, gas and hot-air



*Carpentry Shop*

engines. These machines are all furnished with a large variety of smaller instruments for making complete tests, such as indicators, planimeters, tachometers, extensometers, compressometers, deflectometers, etc., also all the necessary equipment for testing cements and concretes.

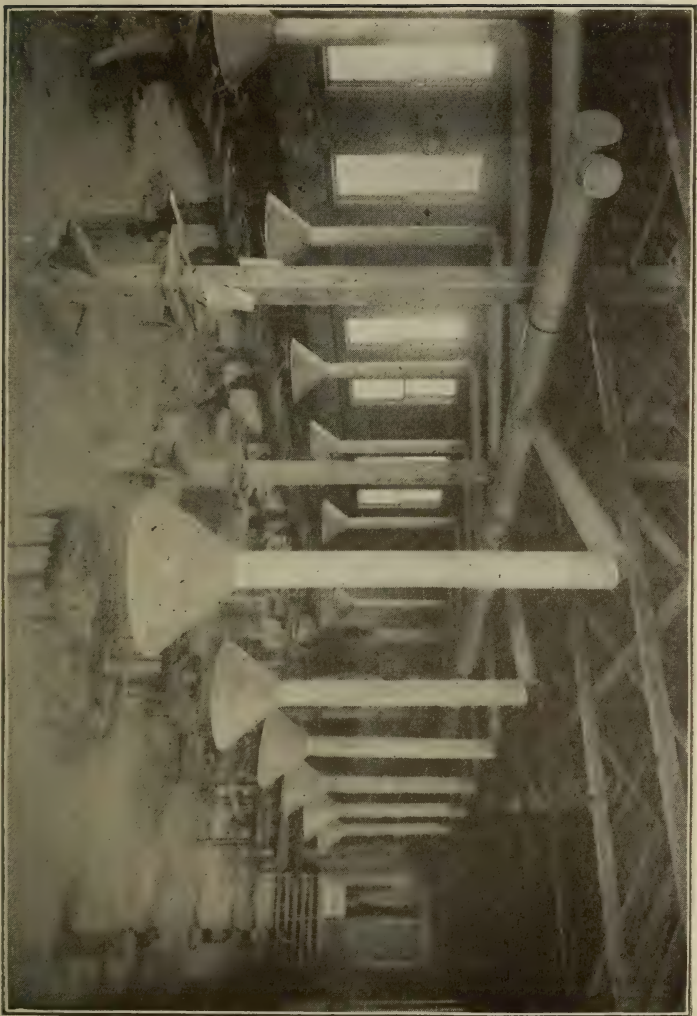
Two courses in Architectural Drawing and Designing are offered. Additional work along this line will be given to students who desire it.

A large number of pictures, drawings, and illustrative material has been recently added to the equipment through the liberality of manufacturers and friends of the College.

The following work is offered:

- 3 Machine Shop.
  - b. Manipulation of the various machines in turning, planing, shaping, milling, gear cutting and tool making.
- 4 Machine Shop.
  - b. Construction of some machine or appliance from designs made in drawing room.
- 5 Mechanical Drawing.
  - b. Instrumental drawing, geometrical problems and parts of machines. This work is offered during the entire year, and at hours convenient to teachers and students.
- 5a Architectural Drawing.
  - b. Rendered drawings of simple buildings, examples of various orders, giving facility in draughtmanship, familiarizing students with principles.
- 5b Architectural Design.
  - b. Principles of planning introduced in practical problems, exercises in composition and details.
- 5c Perspective.

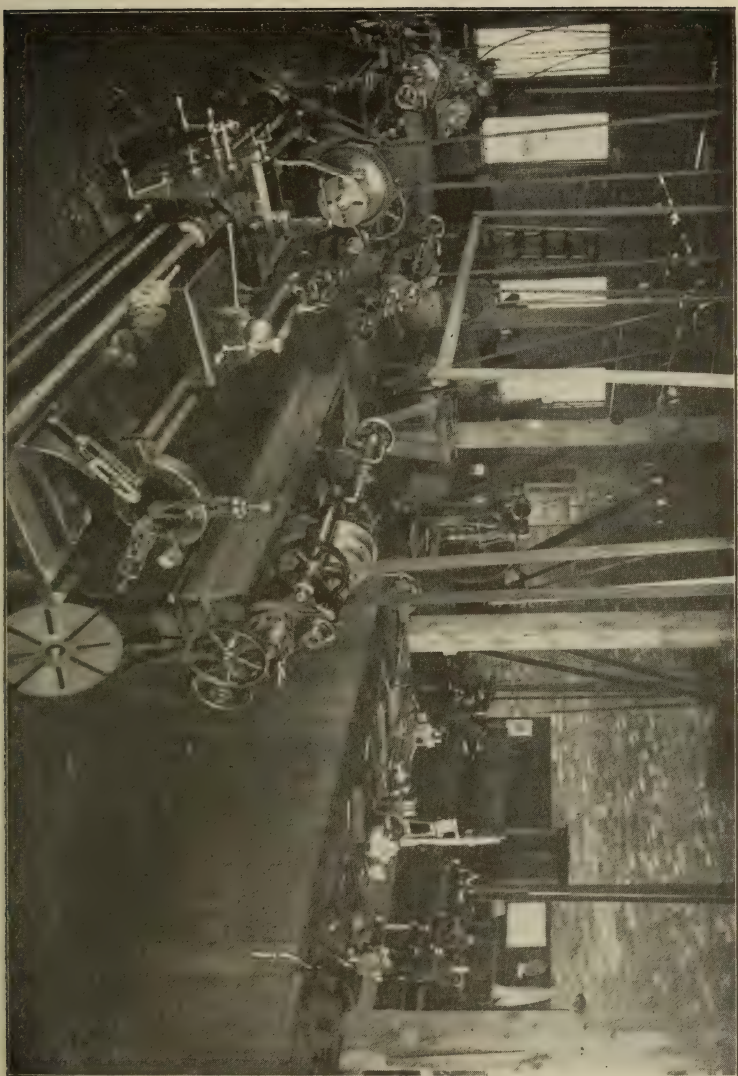
A full course in perspective is offered to those students who desire to especially fit themselves for work in architecture.
- 6 Descriptive Geometry.
  - b. Instruction in methods of representing by drawing all geometrical magnitudes and solution of problems relating to these magnitudes in space.
- 7 Machine Design.
  - b. Solution of various problems involving the design of simpler parts of the machine.  
Klein's Machine Designs.



*Blacksmith Shop*



- 8 Machine Design.  
Continuation of the preceding course.
- 9 Kinematics.  
b, Geometry of machinery, problems in the design of motion transmitting appliances.
- 10 Elements of Mechanism.  
a, Elements of machinery, velocity ratios, graphic representation of speed and acceleration. Motion transmitting parts, such as gears, belts, cams, screws, link work. Automatic feeds, parallel and quick return motions. Designing.  
Wood and Stahl.
- 11 Gas and Oil Engines.  
a, Study of the theory, design and operation of the different types and cycles of gas and oil engines.  
Hutton's Gas Engines.
- 12 Steam Engines.  
a, Study of the modern steam engine, slide valve, and when in combination with independent cut-off valves, link motion and Zeuner diagrams, reciprocating parts and indicator practice.  
Ripper's Steam Engine.
- 13 Steam Boilers.  
a, Advantages and disadvantages of using the various forms of boilers, methods in construction, tubes and flues, plates, riveting, bracing, grate and heating surface, gauges and feed appliances, setting, care and operation.  
Peabody's Steam Boilers.
- 14 Thermodynamics.  
This course covers those principles of the theory of heat which are necessary to a study of the various kinds of heat engines. The application of the laws of thermodynamics to the steam engine is shown, and a study is made of steam engine economy by entropy temperature analysis and by other graphical methods.
- 15 Strains in Framed Structures.  
a, Graphical determination of stresses under action of static, moving and wind forces.  
Green, Vol. 1.
- 16 Mechanics of Materials.  
a, Study of the strength and elastic properties of materials of construction, and elementary stresses of deformation in tension, compression, shearing, torsion and flexure and mechanics of beams, columns and shafts.  
Merriman's Mechanics of Materials.



*Machine Shop*

**17 Experimental Engineering.**

b, Here each student is required to carry out a definite series of tests of the various materials of construction, such as timber, cast iron, wrought iron, steel, cements and concretes. He is also required to make complete tests of efficiencies of gas engines, hot air engines, steam engines and boilers, etc.

**18 Experimental Engineering.**

An advanced course in experimental engineering. Continuation of preceding course.

**19 Engineering Design.**

b, Solution in the drawing room of some practical problems in design and making working drawings of same.

**20 Engineering Design.**

Continuation of preceding course.

**21 Structural Design.**

A course in the designing of roofs and buildings for power stations. Designed for students in mechanical and electrical engineering.

**22 Structural Engineering.**

Continuation of Course 21, with special reference to results obtained from Course 18.

**23 Transmission of Power.**

This work includes a study of the methods employed for transmission and measurement of power in machine shops and factories, and a review of experiments which have been made to determine the efficiency of the various systems of power transmission.

Attention is also given to the design of transmission machinery, and to the design and arrangement of the equipment in power plants.

**24 Statics.**

Treated with special reference to the requirements of engineers. Resolution and composition of forces; center of gravity; principles of equilibrium with numerous applications. Graphic as well as algebraic methods are used.

The various hurtful resistances to friction are considered, and numerous problems worked out in the drawing room.

**25 Heating and Ventilation.**

This course covers a study of the principles underlying the design of the various systems of heating and ventilation in common use, including such details as loss of heat from buildings, problems in proportioning ventilating ducts, and the arrangement of systems of piping for steam and hot water. A study is also made of the various mechanical details entering into the installation of private plants and also plants operated from central stations.



*Testing Laboratory*



## 26-27 Thesis Work.

At the beginning of the fifth year's work a subject is assigned to each student, which he is to investigate, and on which he is required to prepare a thesis. This work may involve original design, or it may involve an experimental investigation of the action of certain machines or appliances or of phenomena developed by the action of certain mechanical forces. In the pursuit of this work the student is thrown largely on his own responsibility. He is expected to familiarize himself with the literature on the subject and to study thoroughly the methods involved in the subject selected.

## SHORT COURSE IN PRACTICAL STEAM ENGINEERING

Modern agricultural methods have introduced in such a marked degree the steam engine as a substitute for animal power that the consequent growing demand for steam engineers has led the College to arrange a two-term course of study for the special training of steam (especially traction) engineers. Extreme care has been taken only to offer such work as shall prove valuable to the man running the traction engine or other machinery. A relatively large amount of shop work, engine repairing and engine running is introduced, with a proper proportion of recitations in closely allied subjects. Upon the satisfactory completion of this work the student is given a certificate which is virtually the same as a license in this state to run an engine.

Students who desire to take this course are expected to pass satisfactory examinations in arithmetic as far as the preparatory class carries that subject in the fall. Also to read intelligently and show such general elementary training as shall indicate that they are able to understand the subjects embraced in the engineering course.

(Winter Term, January 6 to March 20)

Arithmetic.....	a 5
Physics of Steam.....	a 5
Civil Government.....	a 5
Forging.....	b 3
Mechanical Drawing.....	b 2

(Spring Term, March 23 to June 10)

Algebra.....	a 5
Steam Engine Lectures.....	a 5

Elementary Physics.....	a 5
Forging.....	b 2
Mechanical Drawing.....	b 3
Engine Practice.....	b 5

## Department of Electrical Engineering

PROFESSOR MATHEWS, MR. HOY

The aim of the work offered in Electrical Engineering is to impart to the student a practical knowledge of the principles of this branch of engineering. Recognized as it is as one of the most important engineering subjects, a well equipped laboratory is provided for the use of the student to supplement the lecture and recitation work of the class room. The laboratory equipment consists of generators and motors of both the direct and alternating types, transformers, and measuring instruments of different types and classes for the recording and measuring of current and pressure, a sixty-cell storage battery used in connection with the work in photometry, various types of lamps, arc and incandescent, lamp banks, rheostats, and other apparatus used in connection with testing.

The following courses are offered:

### 1 Electricity and Magnetism.

This course embraces a study of the theory and principles of static and current electricity, magnetism and the magnetic circuit, electromagnetic induction and laws of the electric circuit, primary batteries, principles of telegraphy and the telephone.

### 2 Telephone Engineering.

A study of the theory and principle of the telephone, study of parts and construction of different types, switchboards, and auxiliary apparatus, lines and line construction.

### 3 Dynamo Electric Machinery.

Theory of the magnetic circuit, magnetic induction in iron, principles underlying the design, construction and operation of direct current generators and motors.

b, Resistance and insulation tests, experimental study of the operation and behavior of different types of motors and generators, efficiency tests.

#### 4 Alternating Currents.

Study of the flow of alternating currents, inductance, capacity, principle of construction of alternating current generators and motors, transformers,

b, Measurement of inductance and capacity, wave form of pressure and current, efficiency tests of machines and transformers.

#### 5 Dynamo Design.

In this course the student works out and completes a full set of drawings of a shunt or compound wound type of direct current generator of small size. The object of the course is to teach the theory of design of machines and to familiarize the student with the details and parts of the machine in relation to each other and to the machine as a whole.

#### 6 Electric Light and Power Distribution.

This course includes a study of transmission lines, resistance and inductance effects in line circuits, kinds of apparatus used in the generating station and in the receiving station, arc and incandescent lamps, special forms of lamps, indicating and recording instruments.

b, Laboratory work along the lines of lamp testing and the calibration of instruments.

#### 7 Polyphase Currents.

A study of polyphase currents, machines, transmission systems and measuring apparatus.

b, Experimental work in connection with polyphase currents.

#### 8 Electrical Design.

This course includes work in the design of lifting magnets, clutches and transformers, and deals with the principles involved in the construction of the apparatus mentioned above.

#### 9 Design of Power Stations.

This course includes a study of different types of stations, arrangement of boilers, engines, machines, switchboards and electrical apparatus, location of station with respect to distributing system. A station design is worked by the student and drawings of plans made.

#### 10 Installation and Testing of Power Plants.

This course includes a study of foundation construction and setting of machines, number and division of relative to the capacity of the plant, building of switchboards, efficiency and operation tests of plants.

#### 11 Thesis.

The thesis work consists of a complete investigation of some electrical subject or apparatus or the design of a machine or other electrical

appliance, containing when possible the results of personal and independent observation. The subject must be selected early in the year and reports submitted from time to time concerning the progress of the work to the professor in charge of the work.

12 Thesis.

A continuation of the work of the 1st semester.

## Department of Civil Engineering

PROFESSOR DERR

The course in Civil Engineering is designed to impart to students general and technical knowledge, so that, equipped with their theoretical education and as much of engineering practice as can well be acquired in college, they may develop into successful practitioners.

It is aimed to give as thorough a preparation as time will permit in the following subjects: The surveying of land, location and construction of roads, railroads, canals and water works; the construction of foundations in water and on land, and of superstructures and tunnels; the application of mechanics, graphical statics, and descriptive geometry to the construction of the various kinds of arches, trusses, roofs, and bridges; the sewerage of towns, and the irrigation and reclaiming of land; the preparation of detail drawings, and of plans and specifications; the laws of construction as related to contracts, bids and bidders; political economy for the purpose of making clear the economic value of the civil engineer as a director of industrial enterprises.

1 Surveying.

General principles and fundamental operations; instruments; the declination of the magnetic needle; laying out, parting off and dividing up land; United States land surveys.

Text-book: Raymond's Plane Surveying. Second semester.

2 Surveying.

An abridged course for other students in engineering and agriculture, along the lines of Course 1.

3 Surveying.

A continuation of Course 1. Leveling, higher surveying; adjustments



of instruments; topographic and exploratory surveying; plane and tachymetric surveying. First semester.

4 Topographical Surveying.

Triangulation, precise leveling. Transit stadia lines, connecting with triangulation stations, form the basis for the topography, and plane-table practice is given in filling in the details. Maps are plotted to scale from the co-ordinates of the stadia lines, adjusted to the triangulation, and contours are drawn. Recitations, field work, computations and drawings.

Text-book: Wilson's Topographical Surveying. Second semester.

5 Hydraulics.

Hydrostatics and theoretical hydraulics; study of flow through orifices, tubes, pipes, over weirs, in conduits, canals and rivers; applications in engineering, water power plants and developments.

Text-book: Merriman's Hydraulics. First semester.

6 Geodesy.

Construction and use of instruments with reference to the elimination of instrumental errors; precise leveling; methods of sounding; development of the method of least squares, with application to survey problems and to the adjustment of a triangulation.

Text-book: Crandall's Geodesy and Least Squares. Second semester.

7 Water Supply.

The design, construction, operation and management of municipal water supply systems.

Text-book: Turneure and Russel's Public Water Supplies. Second semester.

8 Irrigation.

A study of the principles underlying the design and construction of irrigation works. Hydrography, canals, storage reservoirs.

Text-book: Wilson's Irrigation Engineering. Second semester.

9 Masonry and Foundations.

Building stone, retaining and reservoir walls and dams, arches; mechanics of masonry construction; foundations on land and water; coffer dams, caisson and crib dams; pneumatic caissons.

Text-book: Baker's Masonry and Foundations. Second semester.

10 Sewerage.

A study of the design, construction and operation of sewer systems, and of the various methods of sewage disposal; water purification.

Text-book: Folwell's Sewerage. First semester.

11 Roads and Pavements.

Construction and maintenance of city streets and country roads; study

of pavements and paving materials.

Text-book: Baker's Roads and Pavements. First semester.

**12 Contracts and Specifications.**

Synopsis of the law of contracts as applied to engineering construction. Study of typical contracts and specifications. Riparian rights, boundary lines, survey descriptions, etc.

Text-book: Johnson's Contracts and Specifications. First semester.

**13 Railroad Engineering.**

The field work includes the laying out of curves and the staking out of structures, in addition to making the reconnaissance, preliminary and location surveys for a short line of railway.

Recitations, lectures, field work and drawing. Second semester.

**14 Dam and Reservoir Design.**

The study of modern hydraulic constructions. Dams, reservoirs, conduits, levees, etc. Structures relating to water power, canals and irrigation. Second semester.

**15. Structural Design.**

Computation of stresses in roof and bridge trusses; highway and railway bridges trusses; graphic analysis of simple beams and roof and bridge trusses; center of gravity and moment of inertia.

Text-book: Merriman and Jacoby's Roofs and Bridges, Parts I and II. First semester.

**16 Structural Design.**

Principles of economic design; design of plate girder bridge, pin bridge, riveted bridge; continuous bridges, draw bridges, cantilever bridges, suspension bridges, arches; building construction.

Text-book: Merriman and Jacoby's Roofs and Bridges, Part III. Second semester.

**17 Hydraulic Motors.**

A study of reaction turbines and impulse wheels; construction, regulation, testing, sources of loss of energy.

Text-book: Bodmer's Hydraulic Motors. First semester.

**18 Reinforced Concrete.**

A study of reinforced concrete construction, including investigation of stresses and the determination of form and proportions.

Recitations, computations, and drawing. First semester.

**19 Thesis.**

The thesis is intended to show the student's ability to apply the fundamental principles acquired in this course, in original investigation or

design of some engineering structure. The subject should be announced at an early date and the plan of work submitted for approval to the professor in charge.

20 Thesis.

A continuation of the preceding course, the student working independently and making regular reports showing the progress of the investigation or design to the professor having charge of the subject.

---

### **Department of English Language and Literature**

PROFESSOR EYERLY, ASSOCIATE PROFESSOR POWERS.

In this department the aim is to make the study of language and literature practical. Language is regarded as an instrument for the performance of a large part of the most important and the most delicate work of the world. Literature is studied large'y with the view both of discovering such principles and processes of thought building as the student may embody in original composition, and of finding such truths as will guide him in his reading, heighten his appreciation of good literature, and quicken his conception of life.

The following courses are given:

For description of Courses 1 to 6, see the Preparatory Department.

7 Advanced Rhetoric.

In addition to the text-book in the principles of rhetoric, students in this course will read certain scientific essays. These essays are selected in part to serve as models in prose composition, in part to afford an introduction to scientific literature. Practice in composition will be secured through the preparation of many short themes and a few more ambitious papers.

8 Advanced Rhetoric.

A continuation of English 7.

9 Chaucer, and a Brief History of the English Language.

Instead of this course the critical study of some masterpieces may be offered.

10 The Elizabethan Drama.

The interpretation of eight plays from Shakespeare, and readings from Marlowe, Beaumont and Fletcher, Jonson, and Webster.

---

**11 Structure and Style.**

Prerequisite, English 8.

An examination of selected works from the best prose writers for the purpose of illustrating the principles of composition.

**12 Structure and Style.**

Prerequisite, English 11.

A continuation of Course 11.

**13 English Literature from 1625-to 1800.**

An historical survey, in connection with the careful reading of some of the classics of this period.

**14 English Poetry of the Nineteenth Century.**

A study of selected poems, chiefly from Wordsworth, Coleridge, Byron, Tennyson and Browning.

**15 English Prose of the Nineteenth Century.**

A study of prose writings representative of the thought and life of this period. The works studied will be from Macaulay, Carlyle, Ruskin, Newman, Pater and Matthew Arnold.

**16 English Prose of the Nineteenth Century.**

A continuation of Course 15. The works studied will be from Scott, Dickens, George Eliot, Thackeray and Meredith.

---

**Department of Latin**

PROFESSOR MCCLLENON

The courses offered in Latin aim to give the student a sufficient knowledge of the language to enable him to pursue the work in science with success. A knowledge of Latin is also a very valuable aid in the mastery and clear understanding of the English language.

The following courses are offered:

**1 Latin.**

Primary principles of the language including inflection and syntax, with special attention to etymology, showing the relation of Latin stems to English words.

Text, *Bellum Helveticum*.

**2 Latin.**

Continuation of Course 1, with completion of *Bellum Helveticum*.

**3 Latin.**



Caesar, Books I, II and III.

4 Latin.

Caesar, Book IV, Cicero, Orations against Cataline, I and II.

5 Latin.

Cicero, Orations against Cataline, III and IV; Poet Archias.

6 Latin.

Virgil, Books I and II, with special attention to scansion, rhetorical figures, and mythological references.

7 Latin.

Virgil, Books III, IV and V.

8 Latin.

Virgil, Book VI. Livy.

9 Latin.

Horace, Odes and Satires.

10 Latin.

Quintilian.

## Department of Modern Languages

PROFESSOR HAYES.

Students who pursue work along scientific, technical or historical lines are virtually compelled to have at least a good reading knowledge of either French or German and in many cases of both.

In the General Science and Home Economics courses two years of either French, German or Latin are required for the degree of Bachelor of Science, and a third year is elective. The student is strongly advised to take a third year, if possible, of the language chosen.

In the Agricultural Course two years either of French or German are required.

In the Engineering Courses only one year of French is required.

### GERMAN

1 German.

German grammar, prose, and composition; constant drill in pronunciation, occasional memorizing of selected passages, and practice in speaking German. Reading is begun early.

Lange's Method.

- 2 Continuation of German 1.
- 3 German historical and other prose of the last century; composition and conversation.  
Joynes-Meissner's Grammar; Stein's Composition.
- 4 Continuation of German 3. In addition there will be extensive reading of scientific German, with Hodge's Course in Scientific German for text-book.
- 5 Lessing and Schiller, with a review of German literature up to their time. Themes, Nathan der Weise and Emilia Galotte, Die Jungfrau von Orleans and Wilhelm Tell.
- 6 Goethe's life and works. Goethe and Schiller. Goethe and Carlyle. Influence upon German and English literature. Themes, Faust. Selected portions from both parts. Dichtung and Wahrheit or Gotz von Berlichingen.

---

### FRENCH

- 1 French grammar, prose, and composition. Thorough drill in pronunciation; reading and practice in speaking begun very early.  
Fraser and Squair's Grammar; Le Tour de la France par deux Enfants.
- 2 Continuation of French 1. Dictation exercises, memorizing of selected passages, conversation.  
Super's Reader.
- 3 Hugo, Balzac, De Musset, and other nineteenth century writers; themes and composition.
- 4 Continuation of French 3. In addition there will be extensive reading of scientific French, with Luquiens' Popular Science for text-book.
- 5 Corneille, Racine, La Fontaine; their lives and works; their influence on their contemporaries; the literature and society of their time. Themes.
- 6 Moliere and Voltaire; their lives and writings; their influence on French and English thought; how they were influenced by English writers, particularly Shakespeare. Themes.

---

## Department of History and Political Science

PROFESSOR HARDING

The aim of this department is to introduce the student to such studies as may enable him to deal with economic problems and to fulfill his social and political duties; to develop in him the power to use critically and constructively the historical method, and especially to awaken in him an interest in the great

field of history and political science and an enthusiasm for personal individual effort. Constant endeavor is made to teach the practical application of the social, political and economic experiences of the race to the problems of modern life.

The text-book is supplemented by lectures and class discussions based upon assigned readings or the original work of students. Students are encouraged in every way to make use of the College library, which is the tool house of this department.

For description of Courses 1 to 6, see the Preparatory Department.

**7 Medieval History.**

A general survey of the history of Europe from the barbarian invasions to the close of the fifteenth century. Lectures, text-book, papers, reports and practice in application of the fundamental principles used in testing the value of historical material.

Robinson's History of Western Europe.

**8 Modern History.**

Continuation of Course 7. History of Europe from the opening of the sixteenth century to the present time.

Robinson's History of Western Europe.

**9 American History.**

This course is a study of constitutional and political development from 1783 to 1829. Lectures, library work, reports, and careful study of assigned sources.

Hart's Formation of the Union.

**10 American History.**

Continuation of Course 9. The constitutional and political history of the United States from the beginning of Jackson's administration to the Civil War.

Wilson's Division and Reunion.

**11 Political Economy.**

A study of the fundamental laws of economic science. Text-book, supplemented by lectures on special subjects and assigned readings. Seager's Introduction to Economics.

**12 Sociology.**

The fundamental principles of social science. Blackmar's Elements of Sociology will be used as a text-book, supplemented by lectures and assigned readings.

**13 Government and Politics of the United States.**

A study of actual government in the United States, federal, state and local, including party machinery and methods, the civil service and the nature and action of public opinion. Bryce's American Common-

wealth will be used as a text, with assigned readings in Hart's Actual Government and Woodburn's American Republic.

14 Economic Problems.

Labor problems will be considered this year. The course covers the topics of labor unions; strikes, lockouts and boycotts; the wage question; conciliation, arbitration and collective bargaining; wage earning by women and children; immigration, prison labor and workingmen's insurance and pensions. Lectures, discussions and reports.

Course 11 must precede this course.

15 Nineteenth Century History.

A somewhat intensive study of the development of the institutions and the international relations of Europe in the nineteenth century. First semester, 1815 to 1850. Open to those who have had Courses 7 and 8 or an equivalent. Alternates with Course 17. Omitted in 1906-07.

16 Nineteenth Century History.

Continuation of Course 15. History of Europe from 1850 to the present time. Current political and international problems. Alternates with Course 18. Omitted in 1906-07.

17 The Civil War and Reconstruction Era.

A general study of this important period of United States history, with considerable research work. This course affords an opportunity for training in the scientific method of historical investigation. Open only to students who have had one year of work in either European or American history. Given in 1906-07 and in alternate years thereafter.

18 The Civil War and Reconstruction Era.

Continuation of Course 17. This semester's work will cover the period from 1866 to 1877. Given in 1906-07. Omitted in 1907-08.

---

## Department of Philosophy

PROFESSOR MCCLLENON

In every business or profession, a knowledge of the laws of the mind is of very great value in the attainment of the highest success. Accordingly, Psychology finds a prominent place in nearly every college curriculum.

As character lies at the foundation of all true success, a study of the moral as well as the mental nature is very important. For this reason, a course in Ethics is also required.

For those who intend to teach, a course in Pedagogy is offered, including History of Education, and Methods of Teaching. The graduates of the College who have taken this course



and have had a year's experience in teaching are entitled to a provisional state certificate, and, after two years of successful experience in teaching, will be entitled to a state certificate.

The following courses are offered:

1 Psychology.

Discussion of the various phases of mental activity. Special attention given to the cultivation of mental faculties and will power, and their relation to the study of Pedagogy.

Text: Halleck's Psychology and Psychic Culture.

2 Ethics.

This course includes a study of ethical principles, grounds of governmental authority, discussions on conduct of individuals and nations.

Text: Hopkins.

3 History of Education.

1. The Oriental Nations.

2. The ancient classical nations.

3. Christian education before the Reformation.

4. Education from the Reformation to the present.

Text: Painter's History of Education.

4 Methods of Teaching.

Special attention to child study, school organization, and school management. White's text-books will be used as a basis for the work given.

---

## Department of Mathematics and Astronomy

PROFESSOR BROWN, MR. NELSON.

The general work of this department is planned with the view of cultivating in the minds of the students habits of systematic and accurate thinking, as well as of giving a knowledge of methods and a facility in making calculations in dealing with practical problems. Independent effort is encouraged to the greatest possible extent, the solutions of problems and original demonstrations forming an important part of each course.

The class work in General Astronomy is supplemented by the use of instruments in the observatory. These include a six-inch equatorial telescope, a transit instrument, a sidereal clock, and a chronograph.

For description of Courses 1 to 6. see the Preparatory Department.

- 
- 7 Solid Geometry.  
Prerequisite, Course 6.  
All the important principles of the subject will be covered.
  - 8 Advanced Algebra.  
Prerequisite, Course 4.  
Graphs, permutations and combinations, complex numbers, elementary theory of equations, determinants, partial fractions.  
Text: Hawke's Advanced Algebra.
  - 9 Plane Trigonometry.  
Prerequisite, Courses 4 and 6.  
The elementary notions of trigonometry; solutions of plane triangles.
  - 10 Plane and Spherical Trigonometry.  
Course 9 continued through spherical trigonometry.
  - 11 Analytic Geometry and Calculus.  
Prerequisite, Courses 8 and 9.  
The greater part of the semester will be devoted to analytic geometry.
  - 12 Calculus.  
Course 11 continued.
  - 13 Analytic Mechanics.  
The applications of analytic geometry and calculus to the solutions of mechanical problems.
  - 14 Analytic Mechanics.  
Course 13 continued.
  - 15 General Astronomy.  
Young's Manual of Astronomy will be covered and frequent use made of the instruments.

---

### Department of Physics

PROFESSOR MATHEWS, MR. HOY.

The various courses offered by this department are designed for three classes of students.

First—Those desiring a scientific training where physics is necessary as a foundation subject.

Second—Those expecting to gain some knowledge of the principles of physics and to fit themselves as teachers of science in our high schools.

Third—Those wishing to make physics their major subject.



*General Physics Laboratory.*

From the fact that physics is one of the foundation sciences and that a knowledge of its laws is necessary to every student seeking a scientific training, the department has been well fitted with rooms and appliances to provide this training. Its lecture rooms are well provided with arm-rest chairs. The laboratories are well lighted and provided with n n-vibratory piers. Water, gas and electricity are provided for the recitation rooms and the dark room and laboratories.

This department is housed in the engineering and physics building. Its facilities for instruction are equal to those of any in the Northwest.

The laboratory equipment includes such expensive pieces as analytical balances, laboratory clock making electrical contact every second, cathetometer, spectroscopes, microscope, photometers, stereopticon and reflectoscope (arc light), standard cells, dynamos, electro motors, transformers, galvanometers, storage battery, induction coils, ammeters, magnetometers, voltmeters, wattmeters, Wheatstone bridges, polariscope, quadrant electrometer, lathes and wireless telegraphy and X-Ray apparatus.

The following is the list and descriptions of the courses offered in this department:

For the description of Courses 1 and 2, see the Preparatory Department.

### 3 General Physics.

Prerequisite 2.

a, Mechanics of solids and fluids and heat with numerous examples. Static electricity and magnetism.

b, Exact measurements of mass, distance, time, calorimetry, etc.; study of electrical and magnetic fields.

Hastings and Beach.

Austin and Thwing.

### 4 General Physics.

Prerequisite 3.

a, Electricity and its applications in the dynamo, motor and transformer, electric light and study of electrical and magnetic fields; nature and velocity of sound, refraction and reflection of light, interference and color.

b, Laboratory work on topics mentioned in (a).

Hastings and Beach; Austin and Thwing.



5 Advanced Physics.

Prerequisite 4, Ms. 7 and 11.

a. Mechanics, kinematics, kinetics, mechanics of fluids and heat and its applications; magnetism, static electricity, electrolysis.

b. Laboratory work and measurements covering topics mentioned in (a).

Nichols and Franklin, Vol. 1 and part of Vol. 2; Nichols' Laboratory Guide.

6 Advanced Physics.

a. Induction currents, primary batteries, electric oscillations and waves, nature and motion of sound, physical theory of music, nature and propagation of light, refraction, reflection, interference, color and polarization.

b. Laboratory work on topics of (a).

Nichols and Franklin, Vol. 3; Nichols' Laboratory Guide.

7 Heat.

a. Sensible and latent heat, dynamical generation of heat, thermometry, calorimetry, specific heat, atomic and molecular heat capacities, evaporation, ebullition, vapor densities, cooling, diathermacy, conductivity and dynamical equivalent of heat.

b. Laboratory work covering topics mentioned in (a).

Preston's Theory of Heat; Maxwell's Heat.

8 Light.

a. Shadows, and images, spectrum, velocity of light, color, phosphorescence, fluorescence, diffraction, measuring waves, prisms and polarization.

b. Laboratory work along same line as (a).

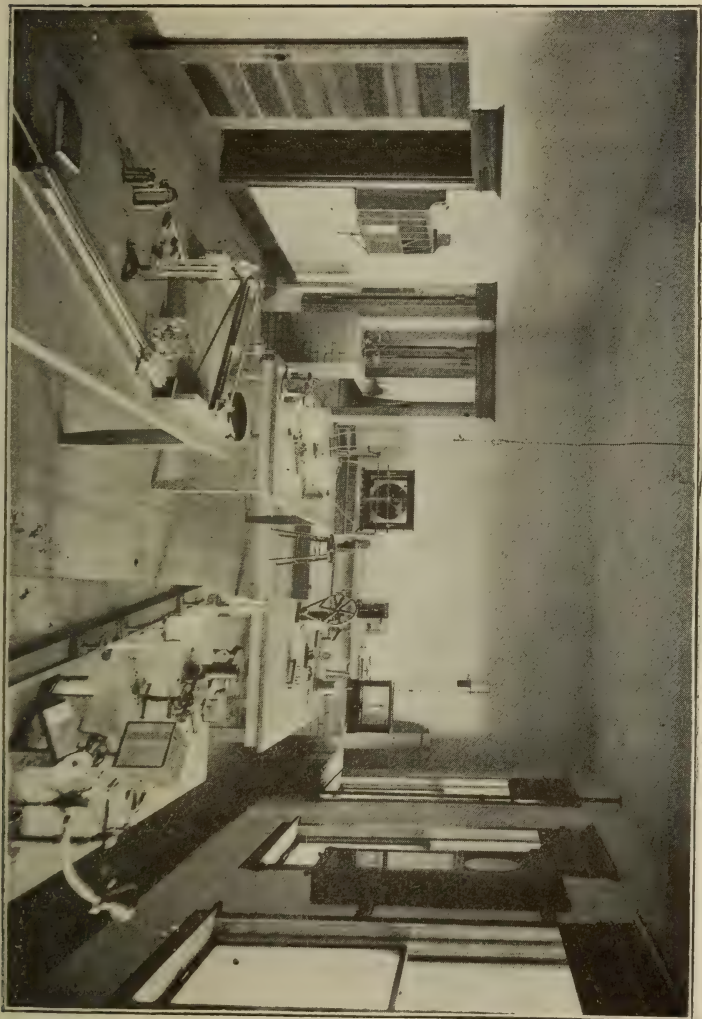
Preston's Light.

---

## Department of Botany

PROFESSOR OLIVE.

The laboratories of the Department of Botany occupy the second floor of the "Botany and Horticulture Building." These laboratories are supplied with the apparatus necessary in the work of the several courses which the department offers. The general laboratory seats forty students; it is well lighted with north light, and is supplied with new and modern microscopes. The advanced laboratory is supplied with microscopes, microtomes, Troemer balances, chemicals, and other apparatus and supplies necessary in advanced and original research work. The department has a complete and convenient herbarium



*Advanced Physics Laboratory.*

of the phanerogamic and mycological flora of the northern United States.

1 General Botany.

2 General Botany.

These courses are designed to give the student a general knowledge of the plant kingdom, and incidentally develop his powers of accurate observation. They include the morphology, physiology, and classification of the principal groups of plants.

3 Advanced Botany.

Mycology; a study of common types of the more important groups of fungi. Special attention is given to the fungi of economic importance

4 Advanced Botany.

a, Experimental plant physiology. A series of experiments treating of plant functions. Effects of chemicals on the growth of plants and as used as fungicides.

or, b, Taxonomy of Spermatophytes. A systematic study and classification of the seed plants. Herbarium and reference work.

5 Pharmacognosy.

Prerequisite, Botany 1.

Histology of important drugs; physical, microscopic, and chemical tests in determining crude and powdered drugs.

---

## Department of Geology

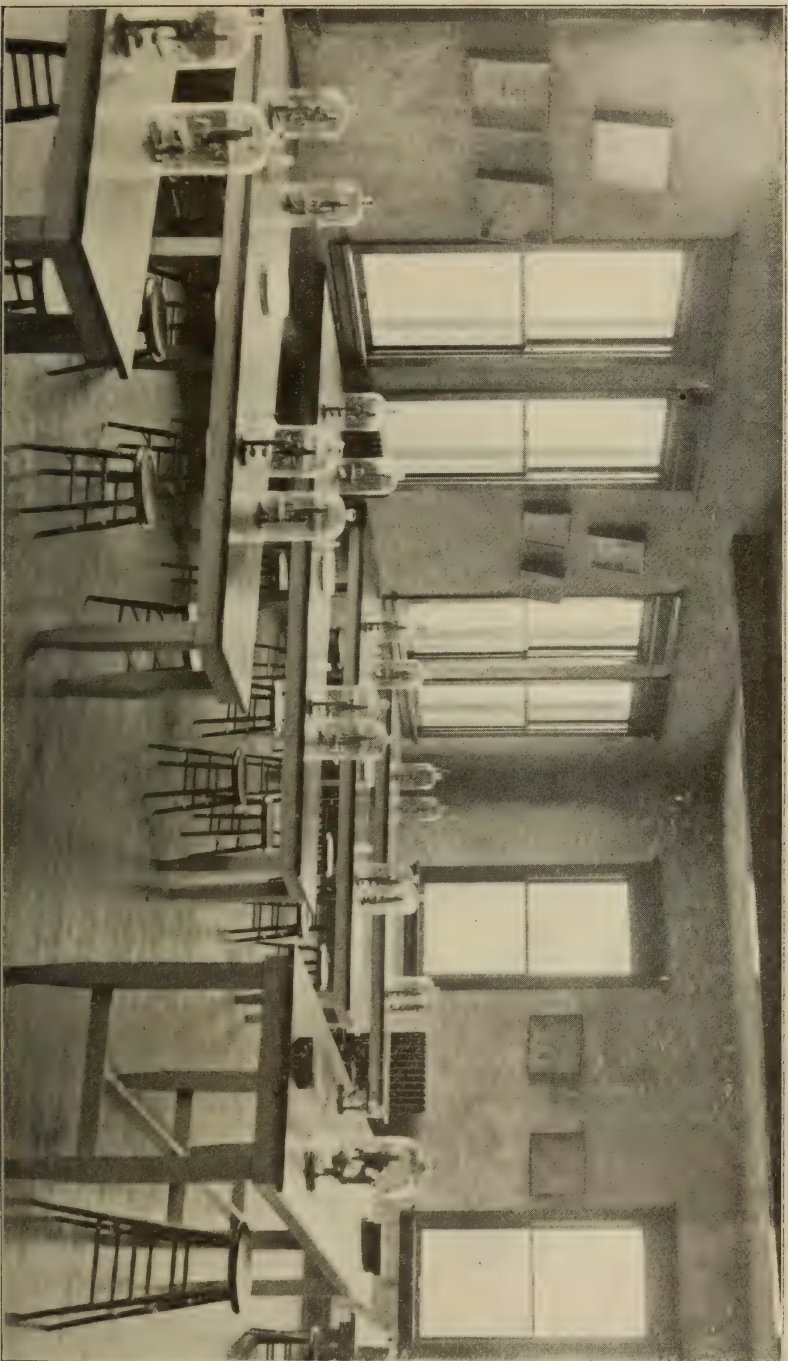
PRESIDENT SLAGLE.

1 Geology.

Required of all students in the General Science and Civil Engineering courses, and also of those electing the Animal Husbandry, Horticulture or Agronomy group of the Agricultural course.

The object of the course in Geology is to give the student a review of the physical condition of the earth; the various dynamic agencies and the results of their activities; the origin and the structure of rocks; and, finally, the geological history of the globe and the appearance and development of the principal races of animals and plants.

The work is based on Le Conte's Elements of Geology. Collections of rocks and minerals, physiographic and geological models and also lantern slides, afford ample means for illustration.



*Botany Laboratory.*



### Department of Zoology

DR. MOORE, MR. MILLER, MR. MATHESON.

The work offered by this department is designed, first, to give the student a general knowledge of the principles of animal biology; second to give especial attention to technique and to the development of originality in the individual. Students contemplating the study of medicine may by a judicious selection



*Zoology Laboratory.*

of courses in this and other departments secure an equivalent to the first year's work offered by the medical colleges

The department is adequately equipped with specimens and apparatus, to which frequent additions are made.

For description of Course 1, and work in nature study, see the Preparatory Department.

#### 2-3 General Zoology and Physiology.

a. General Zoology. A study of type forms of invertebrates and ver-

tebrates, and the elements of histology and embryology.

Text and references, Hertwig's *Manual of Zoology*; Parker & Haswell's *Text-book of Zoology*; Lange's *Comparative Anatomy*.

b, Physiology. This subject continues throughout the last half of the second semester. Lectures, recitations, demonstrations, and required readings in advanced human physiology.

Text and references, Thornton's *Human Physiology*; American *Text-book of Physiology*; Landois' *Human Physiology*; Verworn's *General Physiology*.

c. Veterinary Physiology. Required of agricultural students during the last half of the second semester instead of human physiology.

F. Smith's *Manual of Veterinary Physiology*.

Prerequisites, free hand drawing and all work below the sophomore year.

#### 4-5 Anatomical Methods.

This course is intended to acquaint students preparing for the study of medicine with anatomical nomenclature, and methods of dissection. It includes the study of the anatomy of the cat, with special reference to physiology.

Text, Davidson's *Mammalian Anatomy*; Reigart & Jennings' *Anatomy of the Cat*; Morris' *Human Anatomy*.

#### 6-7 Histology.

The structure of the cell and the tissue elements together with micro-technique during the first semester; vertebrate organology, the microscopic structure of vertebrates during the second semester.

Text and references, Bohm-Davidoff's *Text-book of Histology*; Wilson's *Cell*; Stohr's, and Szymonowicz-MacCallum's *Text-books of Histology*.

Prerequisites, 3 or 5.

#### 8-9 Comparative Anatomy of the Vertebrates.

An elective course designed for those students especially interested in anatomy and zoology.

Text and references, Weidershiem's *Comparative Anatomy*; Flower's *Osteology of the Mammalia*; Jayne's *Mammalian Anatomy*; Huxley's *Manual of the Anatomy of the Vertebrate Animals*.

Prerequisites, 5 or 7.

#### 10-11 Entomology.

A general course dealing with the anatomy, embryology, classification, and life histories of insects.

---

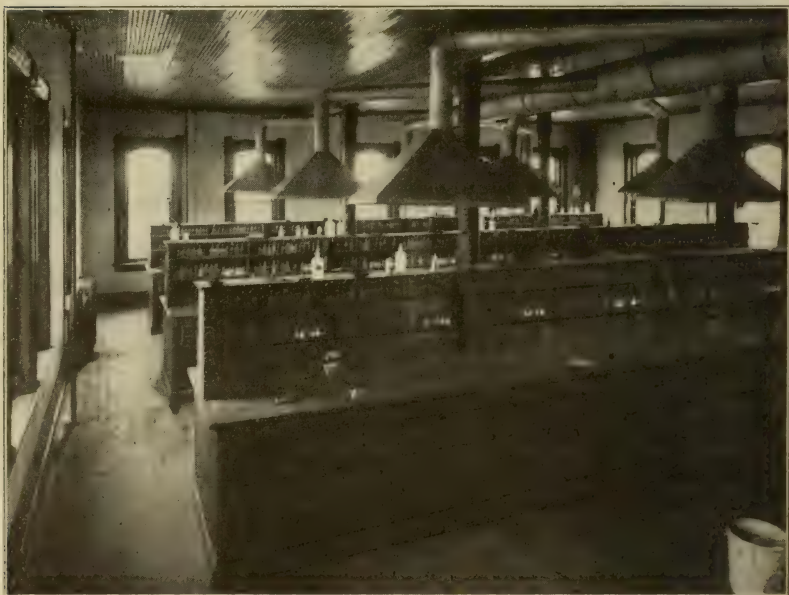
### Department of Chemistry

PROFESSOR SHEPARD, MR. KOCH.

This department is equipped with the latest and most approved appliances for instruction.

The student upon beginning the subject is assigned a desk in the main laboratory. This desk is supplied with a set of reagent bottles, gas and water fixtures. In addition to these a supply of all needful apparatus, such as test tubes, generating flasks, and the like are furnished. The main laboratory, which is located on the first floor of the Chemistry and Pharmacy building, accommodates sixty-four students all working at the same time.

Upon completing the necessary elementary work the student now finds a quantitative laboratory at his disposal.



*Chemistry Laboratory.*

This laboratory accommodates twenty students working together. It is supplied with all quantitative apparatus, such as precipitation flasks, desiccators, lamps and crucibles.

In connection with the quantitative laboratory is a balance room supplied with high grade Trömer quantitative balances. The work is so planned that the student has laboratory work together with didactic instruction throughout the course.

The experiment station laboratories are also located at this College, and their costly and technical appliances and the practical work in constant progress there are within reach for instruction.

The following courses are offered:

1 Elementary Inorganic Chemistry.

Prerequisite, Physics 2.

a, History of chemistry, elements, compounds, symbols, valence, atomic weights, chemical equations, oxygen, hydrogen, nitrogen, chlorine, bromine, fluorine, iodine, sulphur, phosphorus, silicon and their compounds. Bases, salts, acids and alkalies. The metals and their compounds, separation of metals, groups of metals and uses of their compounds.

b, Detection of the non-metallic elements and their compounds. Shepard's Elements of Chemistry.

2 Elementary Organic Chemistry.

a. The principal classes of organic compounds, the characteristics and properties of each class and the uses of their various compounds.

b. Detection of principal metals and the working of a list of unknowns; the detection of principal organic compounds.

Shepard's Elementary Organic Chemistry.

3 Quantitative Chemistry.

b, The apparatus and its uses. Explanations of methods of quantitative determinations and reports of students' analyses. The quantitative analyses of typical chemical compounds, e. g., calcite, magnesium sulphate, metallic ores and coal.

Olsen's Quantitative Chemistry.

4 Chemistry and Physiology of Foods.

a. Food nutrients, chemical characteristics and offices of same, physiology of same, metabolism, balanced rations, standard dietaries. Study of food adulteration.

b. Experiments in digestion of foods, offices of digestive secretions. Detection of adulterants, coloring matter and preservatives.

5 Agricultural and Sanitary Analysis.

Analysis of foods, feeding stuffs, water. Use and analysis of disinfectants, germicides, etc.

Lectures, Official Methods American Association of Official Agricultural Chemists.

6 Agricultural Chemistry.

Johnson's Agricultural Chemistry.



**7 Industrial Chemistry.**

a, Chemistry of manufacturing glass, paper, sugar, petroleum, explosives, acids, water, air, mortars, pigments, photography, alkalies and gases. Demonstrations of examples including water pollution, purification, artificial illumination, petroleum testing, fermentation, air contamination, disinfection, ventilation, bleaches and dyeing.

**8 Electro Chemistry.**

a, Electrolysis, separation of compounds by means of the electric current. Uses of electric furnace in obtaining metals.

---

**Department of Pharmacy**

PROFESSOR WHITEHEAD.

The work of this department is intended primarily to thoroughly teach young men and women the science of pharmacy. Two years high school work, or its equivalent, which must include one year of elementary physics, is required as a prerequisite.

The student finishing the two-year course in Pharmacy given on page 58 may receive the degree of Pharmacy Graduate (Ph. G.) This is the only course of the kind offered in the state and receives the hearty commendation of the State Board of Pharmacy.

The following letter shows how the work in this College compares with that in other schools of Pharmacy.

State of New York  
Education Department  
Albany

January 30, 1907.

Dean B. T. Whitehead,  
Pharmaceutic Dept. South Dakota Agricultural College,  
Brookings, S. D.

Dear Sir:

I beg to inform you that at the recent meeting of the ad interim committee held in Albany, January 7, 1907, it was voted that the Pharmaceutic Department of the South Dakota Agricultural College of Brookings, S. D., be registered in full in group one.

Yours respectfully,

HOWARD J. ROGERS,  
First Assistant Commissioner of Education

This means that we meet the full requirements both preparatory and professional of the Education Department of the state of New York.

This line of work offers many inducements to young men. The requests of the druggists of the state for our graduates are far in excess of the supply and the pure food and drugs laws



*Pharmacy Laboratory*

have opened up a new field for young men who are competent drug and food assayists.

The two years pharmacy work can be applied in the general science course by those students who wish to obtain the degree of Bachelor of Science. This is recommended to those who intend to take up the study of medicine or dentistry, or who wish to prepare for teaching the sciences in the high schools of the state.

The fees for this course are the same as for other college work, i. e., six dollars tuition and two dollars for each laboratory per semester.

1 Scientific Latin.

a. Subject is taught with special reference to its application in pharmacy. The vocabulary employed is strictly pharmaceutical.

Text-book: Robinson's Grammar of Pharmacy and Medicine, first 120 pages.

2 Materia Medica.

a. Medicinal properties, doses and poisonous effects of the various medicines, together with the antidotes which the pharmacist may be required to administer in an emergency, will receive full and careful treatment.

Text-book: Potter's Materia Medica, Pharmacy and Therapeutics.

3 Materia Medica.

a. Continuation of Course 2.

4 Pharmacy.

Prerequisite, Chemistry 2.

a. Forms and uses of pharmaceutical apparatus, weighing by apothecary and metric systems, specific gravity of solids and liquids, heating apparatus, determination of boiling and melting points, distillation, comminution, solution, precipitation, filtration, crystallization, percolation, and study of official medicines, waters, syrups, mucilages, mixtures, spirits, elixirs, liniments, infusions, tinctures, fluid extracts, oleoresins, and extracts.

Text-book: Remington's Practice of Pharmacy.

5 Pharmacy, Laboratory.

b. Preparation of waters, syrups, mucilages, etc., mentioned in Course 4, and must be taken up in connection with it.

Text-book: Remington's Practice of Pharmacy.

6 Pharmaceutical Arithmetic.

a. Relationship of metric, apothecary, and imperial systems of weights and measures, specific gravity, specific volume, percentage problems, concentration and dilution, allegation and chemical problems.

Text-book: Olberg's Pharmaceutical Problems.

7 Pharmacy.

Prerequisite, Courses 4 and 5.

a. Official inorganic salts and their compounds, solutions, emulsions, powders, pills, ointments, and plasters; reading prescriptions.

Text-books: Remington's Practice of Pharmacy; Ruddiman's Incompatibilities in Prescriptions.

## 8 Pharmacy Laboratory.

Prerequisite, Courses 5 and 6.

b, Compounding of prescriptions, making of inorganic salts, solutions, emulsions, powders, pills; reading and compounding prescriptions. Must be taken same term as Course 7.

Text-books: Remington's Practice of Pharmacy; Ruddiman's Incompatibilities in Prescriptions; Olberg's 1,500 Prescriptions.

## 9 Volumetric Analysis and Drug Assaying.

Prerequisite, Chemistry 3.

b, There are at present in the U. S. Pharmacopœia 149 volumetric and 35 gravimetric assays. In this course we endeavor to give enough of this work to enable a student to make any of these assays in an intelligent and accurate manner. The students are required to make their own volumetric and indicator solutions.

A short course in urine analysis is given in connection with this course. Text-books: U. S. Pharmacopœia; Schimpf's Volumetric Analysis; Lyons' Pharmaceutical Assaying; Lecture notes by the teacher.

## 10 Veterinary Materia Medica.

a, A study of the medicinal properties, doses, and uses of the principal drugs used in veterinary medicine.

Text-book: Winslow's Veterinary Materia Medica and Therapeutics.

## Department of Music

HENRY H. LOUDENBACK—Piano, pipe-organ and theoretic branches.

FRANCIS J. HAYNES—Voice and band instruments.

CARL CHRISTENSON—Violin, stringed instruments.

BLANCHE EDINBOROUGH—Assistant in Piano.

## DEPARTMENTS

1. Piano, piano ensembles.
2. Voice, choral organizations.
3. Violin, stringed instruments, orchestra.
4. Pipe-organ.
5. Band instruments.
6. Theoretical studies, as Harmony, History of Music, etc.



## FREE ADVANTAGES

1. Faculty recitals.
2. Choral organizations.
3. Piano technic classes.
4. Elements of music class.
5. History of Music class.
6. Harmony class.
7. Composition class.
8. Theory of Interpretation and Music Forms.
9. Orchestra.
10. Private recitals.
11. Piano practice.
12. Lectures in Music as an art.
13. Class in ear drills and sight reading.

*Band*

The demand at the present time is for men and women who are equally developed morally, mentally and physically.

The chief function of music is to express and excite emotion, hence the pursuance of the study of music tends to develop the emotional powers, and to refine and uplift the moral qualities. As the proper study of music requires as much mental concentration as any other line of study, it is equally strengthening to the intellect.

The aim of this department is to furnish the best methods for the acquirement of a thorough musical education, and to develop "thinking" musicians, not merely musicians of "feeling" alone.

Opportunity is offered, in connection with the College, for a liberal and practical education, and the heads of the various departments are particular to urge students of music to avail themselves of this opportunity. A mere technical training will not suffice. The most successful teachers and students are those who seek the broadest intellectual development.

The prices charged for tuition in the music department are very reasonable when one considers the many free advantages that are offered.

The faculty consists of teachers of superior ability who are specialists in their respective lines.

The department of music, with its various advantages, offers almost as good results as can be attained in the acknowledged centers of musical learning.

### PLAN OF STUDY

The plan of study consists of two general courses, the Preparatory and Regular or Collegiate Course

The Preparatory Course is designed for beginners, or for those who have not been thoroughly trained in the rudiments of music, and prepares the student for entrance into the collegiate course. The time demanded of the student to finish this course depends upon his ability, also upon the advanced stage of the pupil's development when entering. The time generally required will vary from one to three years.

The Collegiate Course leads to graduation and consists of three years' work. Students upon completing the requirements for the second year's work will be granted a teachers' certificate, and upon completing the third year's work will receive a diploma.

Public and private recitals are given frequently by the various members of the faculty and by advanced students. Private recitals are given every two weeks, in which all students are allowed to participate. Students are required to take part in any of these recitals, if prepared. This serves as a special impulse towards earnestness and many accomplish much better work under such an incentive. Aside from this, frequent appearance before others tends to give the student that necessary self-control and repose without which it is impossible to become a finished performer.

### CHORAL ORGANIZATIONS AND ORCHESTRA

A male Glee Club and a Ladies' Chorus are organized at the beginning of the year, to which any student or faculty member of the College is eligible at the recommendation of the instructor in voice. Citizens of Brookings and vicinity are cordially invited to enroll in these organizations also. The two separate organizations are combined the last half of the year as a choral union, the intention being to render some of the choral masterpieces, and oratorios and cantatas.

A large symphony orchestra is also maintained, to which any student, who is qualified, is eligible. Residents of Brookings, who are qualified, are also requested to enter this organization.

### COURSES OF STUDY

Piano, Voice, Violin and Pipe-Organ.

It is impossible to give a definite outline of the course of study to be followed, as it will vary according to the pupil's ability. However, some things must be studied, and beyond that, the instruction is adapted to the personal needs of each student.

### PIANO-FORTE

The methods of technical instruction here employed are known as the Virgil clavier and the Leschetitzky methods. The claviers are judiciously used in connection with these methods and each student is required to practice a certain amount of time each day upon one of these instruments.

The three all-important factors in artistic piano playing are a positive technic, a musical touch, and repose, and the clavier helps the student acquire these quickly by demanding greater powers of concentration of the will.

### PREPARATORY COURSE

This course embraces eight distinct subjects: (a) Mind training; (b) Physical development; (c) Ear training; (d) Technic; (e) Rhythmic studies; (f) Sight reading; (g) Sight playing; (h) Memorizing.

Selections will be made from the following list of studies in pursuing this course:

Kohler Studies.  
Czerny (Leibling's Book I and II).  
Gurlitt studies.  
Loeschhorn, Op. 65 and 52.  
Kunz 200 canons.  
Clementi's Sonatinas.  
Kuhlau's Sonatinas.  
MacDougall's studies in melody playing.  
Easy pieces by modern composers and the masters also.  
Other studies by good composers, not mentioned, may be used.

### COLLEGIATE COURSE

This course leads to graduation and requires three years for its completion. Selections will be made from the various studies during the pursuance of the time necessary to finish the course.

#### FIRST YEAR.

Heller, selected studies (Presser edition).  
Czerny, Op. 299.  
Duvernoy, Op. 120.  
Loeschhorn, Op. 66, Book I.  
Czerny, Op. 553 (Octaves).  
Bach first studies.  
Vogt, Op. 105.  
Cramer—Buelow.  
Bertini, Op. 32 and 29.  
Le Couppey.  
Beethoven, variations.  
Beethoven, variations, Sonata, Op. 49 or Op. 79.  
Mozart Sonate. Haydn Sonate. Piano solos by modern and Romantic composers.



## SECOND YEAR.

Bach inventions (two and three voiced).  
 Bach easy Fugues and Preludes.  
 Pedal studies.  
 Beethoven sonata.  
 Czerny, Op. 740.  
 Mendelssohn, Song Without Words.  
 Jensen, Op. 32.  
 Kullak octaves.  
 Moszkowski's scales.  
 Solos by Grieg, Schubert, Chopin, Schumann and modern composers.  
 First or last movement of a concerto. Ensemble work.

## THIRD YEAR.

Bach—Well tempered clavichord.  
 Chopin, Op. 10 and 25.  
 Moscheles, Op. 70.  
 Clementi, Gradus ad Parnassum.  
 Concerto—Mozart, Beethoven, Mendelssohn, or some other composer.  
 Kullak, octave studies.  
 Suite—Greig or Schumann.  
 Listz, transcriptions and original compositions.  
 Ensemble work.  
 Solos by the masters, both modern and classica.  
 Sonata—Beethoven.  
 Sonata—Scarlatti.  
 Sonata—Schubert.  
 A public program of from one hour and forty-five minutes to two hours in length, to be played in public, unassisted and from memory, will be required of the applicant.

## POST GRADUATE

Czerny—School of Virtuosity.  
 Bach—Organ fugues transcribed by Listz.  
 Bach—Partitas and suites.  
 Scarlatti's sonatas.  
 Chopin—Etudes and compositions.  
 Schubert—Sonatas and Impromptus.  
 Schumann—Noveletten.  
 Selections by Brahms, Rubinstein, Henselt, Moszkowski and others.  
 Beethoven sonata.  
 Concertos—Beethoven, Rubinstein, Chopin and others.

## Voice

## PREPARATORY

Simple exercises in tone placement and breath control. Interval study. Scales and Arpeggio. Panofka A. B. C., Abt's Singing Tutor,

Sieber eight measure vocalises, Whelpton vocal studies. Simple songs for application of principles.

## COLLEGIATE

### FIRST YEAR.

Tone placement and breathing exercises. Scales and Arpeggio. Concone daily exercises and vocalises. Panofka, Lamperti Preparatory, and Bordogni easy vocalises. Song study in phrasing and interpretation.

### SECOND YEAR.

Tone placement and breath control. Marchesi vocal exercises; vocalises by Bonaldi and Nava. Vaccai Italian studies. Study of the best modern and standard classic songs.

### THIRD YEAR.

Study of trill and other musical embellishments. Velocity studies. Lamperti studies in Bravura. Bordogni vocalises. French, German and Italian songs. Oratorio and operatic arias. Formation of Repertory.

## Violin

## PREPARATORY COURSE

Position; tone production on open strings; the most important rudiments of musical theory in general; violin schools by De Beriot and Mazas; duets by Geabauer; solos with piano accompaniment by Herman, Dancla, etc.

## COLLEGIATE COURSE

### FIRST YEAR.

Exercises for obtaining wrist bowing; scales in two octaves from memory for velocity; the different positions; Kayser's Etudes, Part I; duets by Pleyel and Maza; solos with piano accompaniment by Dancla, Sitt, De Beriot, Bohm, etc.

### SECOND YEAR.

De Beriot's Violin School, Part II; Schradieck's Technical Studies; Kayser's Etudes, Part II; Maza's Etudes Specials and Etudes Brillantes; Studies by Kreutzer; appropriate Sonatas by Mozart, Tartini, etc.; Concerts by Viotti, De Beriot, Rode, etc.

### THIRD YEAR.

Concertos by Viotti, De Beriot, Kreutzer, Rode, Spohr, etc.; Sonatas by Beethoven and miscellaneous compositions by Bach, Wienawski, Mendelssohn, and others.

## Organ

### PREPARATORY COURSE

Rink Organ School; elements of organ playing, touch, etc.; study of organ registers; easy pieces by modern composers; hymn playing.

### COLLEGIATE COURSE

#### FIRST YEAR.

Buck, choir accompaniment; Buck, pedal phrasing studies.  
Bach, little preludes and fugues.

#### SECOND YEAR.

Bach, little preludes and fugues.  
Mendelssohn, little preludes and fugues.  
Solo compositions from the classical and modern school.

Organist's certificate granted at the end of the second year of Collegiate course.

### Elements of Music and Ear Training Classes

These classes are free to all students of the music department at whatever standing they may have in any department. The Elements of Music class gives the student thorough training in the fundamental principles of music. The class in Ear Training gives the student excellent training in listening to and learning to distinguish by their relation to each other, the various tones of the scale, combinations of tones, etc. This class also drills in exercises for sight reading, time beating and most particularly lays a good foundation for the systematic development of the memory. All students pursuing the first year of the Collegiate course are required to attend these classes. Drills are also given at this class that enables the student to gain self-control over his mental powers.

### Courses in Musical Theory, Etc.

#### FIRST YEAR

##### FIRST SEMESTER

##### 1 Elements of Music.

The work during first semester consists of getting a thorough knowledge of the fundamental principles governing the laws of music as a science and the acquiring of musical terms relating to movement, degrees of power, etc.

## SECOND SEMESTER

## 2 Elements of Music.

The study of elementary harmony is begun and the student is taught to construct major and minor scales, major and minor triads, dominant seventh chords, dominant major and minor ninth chords, and diminished seventh chords. The student acquires the ability to analyze various intervals and their inversions and learns the natural resolution of the most familiar dissonances and discords. The student is required to make daily applications of principles to the keyboard.

## SECOND YEAR

## FIRST SEMESTER

## 3 Harmony.

Part writing in four parts, open and close harmony, study of triads, seventh chords and their resolutions, chords of the augmented sixth, chords of the ninth with resolution, and practical keyboard work.

## 4 Interpretating of Music.

Text, Goodrich's Theory of Interpretation.

Accent, motive, phrase, etc.; slur and uses; punctuation of phrase, period, etc.; modes of punctuation, cadences; various kinds of periods; musical devices and details; Nuance and ornamentation, signs and symbols; rythm; movement; thematic style; lyric style; harmonic style.

## 5 History of Music.

Text, Baltzell.

Purpose of study; music of ancients; music of Greeks; Ecclesiastical system; notation; music outside the church; Polyphonic Era; various schools; church Polyphony music reform; musical instruments; organ and early organists; beginning of opera and oratorio; Neapolitan schools; early singing and singers; French and English opera; German opera; evolution of the piano forte; early English and French clavier schools; German Polyphonic clavier school; German sonata composers to Haydn.

## SECOND SEMESTER

## 6 Harmony.

Melody writing and harmonizing of a given melody, modulation and improvization in a given key. Harmonic and melodic analysis of the classics. Practical keyboard work.

## 7 Interpretation of Music.

Discord and dissonance; harmonic influence; accompaniment; style and expression; interpretation in general; fugue, tone color, epochs in music; dance forms, modern and classic; miscellaneous forms; Ro-



- mantic forms; mixed forms; rondo form; sonata form; symphonic form; overture, concerto, etc.; songs, forms, etc.

### 8 History of Music.

Haydn, Mozart, Beethoven; Beethoven and sonata; violin and makers; violin playing and violin music; orchestra and absolute music; Romantic opera; Italian School of 19th century; Wagner's Music dramas; other schools; piano playing and composition; Clementi to Field; Romantic school and its masters; pianists and teachers since Listz; Oratorio after Mendelssohn; symphonic poem in Germany; German opera since Wagner; old and new schools in France; musical regeneration in Italy; England and the Netherlands; National schools, Bohemia and Scandinavia; music in the United States; American composers; musical education.

## THIRD YEAR.

### FIRST SEMESTER

### 9 Advanced Harmony.

Melody writing, harmonizing of melodies; improvization; single and double counterpoint.

### SECOND SEMESTER

### 10 Advanced Harmony.

Canon and fugue; analysis of fugues; original composition.

## Music

## COLLEGIATE COURSE

### FIRST YEAR.

#### FIRST SEMESTER—

Elements of Music.....	a 2
Lectures on Music as an Art, Science, etc.....	a 1
Piano, violin or voice.....	a 2
Piano technic.....	a 2
An elective subject in English.....	a 5
Physical culture.....	2

#### SECOND SEMESTER—

Elements of Music and elementary harmony.....	a 2
Ear training, sight reading, etc.....	a 1
Piano, violin or voice.....	a 2
Piano technic.....	a 2
An elective subject in English.....	a 5
Physical culture.....	2

## SECOND YEAR.

## FIRST SEMESTER—

Harmony .....	a 2
Interpretation of Music and music forms.....	a 2
History of music.....	a 3
An elective subject in history.....	a 3
Piano technic.....	a 1
Piano, violin or voice.....	a 2

## SECOND SEMESTER—

Harmony.....	a 2
Theory of Interpretation and music forms.....	a 2
History of music.....	a 3
An elective subject in history.....	a 3
Piano technic.....	a 1
Piano, voice or violin.....	a 2

## THIRD YEAR.

## FIRST SEMESTER—

Advanced harmony.....	a 2
Psychology.....	a 3
An elective subject in history, French or German.....	a 4
Piano, violin or voice.....	a 2
Piano technic.....	a 1

## SECOND SEMESTER—

Original composition.....	a 2
An elective subject in history, French or German.....	a 4
Piano, violin or voice.....	a 2
Psychology and its relation to music.....	a 1
Piano technic.....	a 1

## Expense

The following fees will be charged per semester for instruction under the various named instructors:

Piano and Pedal Organ (Professor of Music), two half hour lessons per week, \$18.00.

Piano (of Assistant), two half hour lessons per week, \$15.00.

Voice culture (Head of Voice department), two half hour lessons per week, \$18.00.

Voice culture (of Assistant), two half hour lessons per week, \$15.00.

Violin, Viola, Cello (Head of Violin department), two half hour lessons per week, \$18.00.

Theoretical Branches—Free to all eligible students enrolled in department of music, and to those electing them in the General Science course.

Solfeggio Sight Singing class—Per semester, \$2.00.

(Two half hour lessons per week).

Piano Practice—Free to all students enrolled in the Department of Music.



*Art Room.*

Organ Rental—One hour per day, one semester, \$4.00.

Clavier Rental—One hour per day, one semester, \$3.50.

Special fees will be charged short course students who desire to pursue any of the branches in the department of music.

Diplomas, \$4.00.

Teachers' certificates, \$2.00.

## Department of Art

MISS CALDWELL, MISS GODDARD

The aim in arranging the courses in this department has been to offer such work as shall correlate with the other college courses in becoming a means to a general education. The object of the work is to cultivate an appreciation of beauty and to develop technical skill.

The department is equipped with a good collection of casts and photographs, and with such tools as are necessary for class work.

For description of Courses 1 and 2, see the Preparatory Department.

3 Theory of Design.

This course treats of the principles of design and their practical application in the home. The history of ornament is briefly reviewed.

4 Theory and Practice of Design.

This course offers two periods a week for lectures and criticism of original designs, and three periods for the carrying out of the designs in various crafts, such as leather and metal work, and wood-carving. Prerequisite, 1.

5 Theory and Practice of Design.

Continuation of Art 4, with the addition of the study of historic ornament.

Prerequisite, 1 and 4.

6 Art History

History of architecture and sculpture.

7 Art History.

History of painting. Reference books in the general library, and a collection of photographs in the department, furnish material for this course.

8 Antique Class.

Study of heads from the antique in full light and shade for construction and modelling. Figure drawing from the antique. Sketching from life.

Prerequisite, 1 and 2.

9 Study of Values.

Value studies in charcoal from still-life as preparatory work for painting.

Prerequisite, 1 and 2.



## 10 Painting.

Still life and flowers in oil, pastel and water-color.

Prerequisite, 9.

## 11 Design and Handicraft.

Plant and animal form in design, original designs in color to be applied in the crafts, and in needle-work in the Home Economics department. The crafts offered are leather and metal-work, wood carving, pyrography and basket weaving.

Prerequisite, 5.

## 12 Normal Course.

In this course such work is given in drawing, color, and design, as will be an aid to students intending to teach in the public schools. Outlines for the different grades are discussed.

Prerequisite, 1.

A certificate is given to students who satisfactorily complete a course in Academic Drawing and Painting, consisting of Art 1, 2, 6, 7, 8, 9 and 10; or a course in Decorative Design and Handicraft, consisting of Art 1, 2, 4, 5, 6, 7, 11.

---

### Department of Public Speaking and Physical Culture

The regular course offers two years work, running through the Sophomore and Junior Collegiate years. The course is elective and the credits are given on the same basis with other subjects.

In addition a special line of work has been arranged for the agricultural students to be given during the Junior year.

The regular work in this department, in addition to the training for public speaking, will include a systematic course of study in the art of expression and reading. The work is designed to be of practical value to the student, whatever his chosen occupation may be.

The old idea that training in elocution and dramatic art could be used to pecuniary and social advantage only by those who become public readers or actors, is a fallacy. A systematic and thorough course in the art of expression will prove invaluable to any man or woman, for the one who knows, and at the same time is able to express what he knows in a pleasing and forceful manner, possesses a most satisfactory kind of education.

It is the aim of this department to stimulate and train the natural powers of expression of each pupil so that their work

may bear the mark of individuality and the stamp of Truth. Expression comes from within. All the work is based upon the thought, "We can give no more than we have, and we can express no more than we are." Hence an endeavor is made to arouse and stimulate the best there is in the pupil himself. Imitation, sham, artificiality, must be done away with, and a genuine tone be given to the work by cultivating the imaginative and emotional powers of the student by a careful analytical and interpretative study of the best literature.

Co-ordinating with this work, aiming at the development and culture of the Inner Self, is a course in voice culture, vocal expression and gesture, consisting of drills and exercises designed to free all the agents of expression so that they may be ready and willing servants of the will. Vocal training will endeavor to secure proper control of the breath, purity and flexibility of tone and tone color, and to detect and eradicate as far as possible voice defects.

Careful attention is given the development of self-possession in order that the speaker may be at his ease and appear at his best, that he may overcome self-consciousness and timidity when expressing himself. He who learns to speak clearly, pleasantly, quietly and calmly is learning to live quietly and pleasantly and calmly. "The poorest education that teaches self-control is better than the best that neglects it."

## COURSES IN THE STUDY OF EXPRESSION

### SOPHOMORE

1. A course of elementary lessons in vocal and bodily expression, including studies in emphasis, force, stress, quality, articulation, etc., exercises in breathing, voice culture, the simpler forms of gesture and fundamentals of pantomime.

Besides the technical work as outlined above, students will analyze and read selections from the best authors with the view to bringing themselves in close touch and sympathy with the feelings and emotions of the writers and at the same time leading them to give suitable and artistic expression to these thoughts and feelings.

Five hours per week.

2. During this semester special prominence will be given to bodily expression. Drills designed to give ease and grace of movement will be introduced. Pantomime and character study will become important features of the work. The work in voice culture will be a continuation of the

work begun in Course 1, the object being to bring the voice under such perfect control that it will accurately reveal the mind's motive.

Analysis will have a place in the work done in this course, dealing with the various principles of literary interpretation, the cultivation of the imagination, intellectual conception, studies for the development of directness, simplicity, variety and naturalness.

Five hours per week.

#### JUNIOR

3. Readings from Dickens, such as *David Copperfield*, *Tale of Two Cities*, *Nicholas Nickleby*, will form the basis for the work to be accomplished in this course, which is a practical application of the principles acquired during the first year's work. This course offers valuable hints in cutting and arranging stories suitable for public readings. Two hours per week. Work in public speaking, extempore, oratory, etc., will have a place in the course throughout this year. One hour per week.

4. Shakesperian Reading. The work during this semester will be a continuation of Course 3. Two hours per week.

Public speaking will also be a continuation of Course 3. Readings, monologues, extempore, oratory, etc. One hour per week.

#### SPECIAL COURSE IN PUBLIC SPEAKING

5. This course is designed to give practical training in public speaking without notes and without having memorized a formal address. It is the aim to lead the pupil to know what to say and how to say it, to make him a ready and easy speaker for all occasions. One hour per week.

6. Continuation of Course 5. One hour per week.

#### PHYSICAL CULTURE

The members of this class meet twice a week for work in physical culture. A course of healthful and invigorating gymnastics is given and pupils are encouraged to give daily attention to these exercises. The work in Physical Training is designed to cultivate grace and ease of movement, preserve the health and increase the strength of the body. The regular class work consists of exercises with the dumb-bells, Indian clubs, wands, fancy steps and rhythmic movements.

---

#### Department of Military Science and Tactics

The work in this department is under the guidance and supervision of the War Department, which has prescribed in General Order No. 101, 1905, a minimum of 100 students in uniform, with three recitations weekly, and that the U. S. Army Officer, sent at the request of the College to conduct the work, shall give instruction as specified in said order.

This instruction is primarily destined to cover briefly the most important points and duties of a soldier's life.

But many of the features of military training will prove of life long value in civil life.

All male students are divided into three groups:

Group 1—Juniors and Seniors.

Group 2—Freshmen and Sophomores.

Group 3—Preparatory.

The students of Group 1 will be required to take the course of lectures and will be examined on the subjects covered.

The students of Groups 2 and 3 will be required to take the military course.

Juniors may elect to do further active work in the battalion of cadets as commissioned officers, if the character of their previous work warrants the appointment.

By direction of the Board of Regents students of all the groups may be required to turn out for unusual or great events, when directed by the Commandant and approved by the President.

Students classified for duty in the military department are organized into an infantry battalion of two companies and band.

Vacancies in the band are filled by the Commandant, detailing from the companies such men as are required. From the nature of band practice little time can be devoted by the band to necessary infantry drill and therefore as a rule no student will be transferred to the band who has not had at least three months' preparatory work in a company.

The appointment of officers and non-commissioned officers is made by the Commandant as approved by the President. These selections are based on natural ability, previous military record and competitive examination.

#### DETAILS OF THE MILITARY COURSE

##### FIRST THREE MONTHS

##### Theoretical.

Nomenclature of the U. S. magazine rifle.

General orders for sentinels.

##### Practical.

Infantry drill regulations through school of the Company.

, The manual of arms.



Butt's calisthenics.

Two battalion inspections in full uniform.

SECOND THREE MONTHS

Theoretical.

Recitations by officers and non-commissioned officers in drill regulations, 1st part.

Firing regulations, ed. 1906, Part 2, chapters 1, 2, 3, and 4.

Army regulations, company administration, correspondence and courtesy.

Lectures by the commandant on various military subjects.

Practical.

Pointing and aiming drill.

Gallery practice, and competition in marksmanship between the companies for the silver trophy.

First aid to the injured.

Military gymnastic exercises.

Bayonet exercises.

Ceremonies—Guard mounting.

Battalion drill, close order.

THIRD THREE MONTHS

Theoretical.

Recitations by officers and non-commissioned officers in drill regulations, 2nd part.

Guard manual.

Service security and information; outposts, advance and rear guards.

Patrols.

Practical.

Company drill, close and extended order.

Battalion drill, close and extended order.

Company and battalion inspection.

Battalion review.

Battalion parade.

Guard mounting with exchange of old for new guard.

Establishment of camp site with posting and relieving sentinels.

Advance and rear guards.

Outposts.

The three members of the battalion holding the highest standings for general excellence will upon graduation be reported to the Adjutant General of the State of South Dakota and to the Adjutant General of the U. S. Army, who will publish their names in the Army register.

## PREPARATORY COURSE

## FIRST YEAR

## FIRST SEMESTER—

English composition, a 5.....	English 1
Arithmetic, including Metric system, a 5.....	Mathematics 1
United States history, a 5.....	History 1
Free Hand drawing, b 3.....	Art 1
Military, 3, or Physical Culture, 2.....	
Elective, 5.....	
Latin, a 5.....	Latin 1
Elementary Physiology, a 4, b 1.....	Zoology 1

## SECOND SEMESTER—

English Composition, a 5.....	English 2
Algebra, a 5.....	Mathematics 2
Civics, a 5.....	History 2
Military, 3, or Physical Culture, 2.....	
Elective, 6.....	
Latin, a 3, or .....	Latin 2
Physiography, a 3.....	Physiography 1
Free Hand Drawing, b 3, or .....	Art 2
Mechanical Drawing, b 3.....	Mechanical Engineering 5

## SECOND YEAR

## FIRST SEMESTER—

Rhetoric and English Composition, a 5.....	English 3
Algebra, a 4.....	Mathematics 3
Greek History, a 3.....	History 3
Library Course, a 1.....	Library 1
Military, 3, or Physical Culture, 2.....	
Elective, 8.....	
Latin, a 5, or .....	Latin 3
Elementary Zoology, a 3, b 2.....	Nature Study 1
Cooking, b 3, or .....	Domestic Art 1
Carpentry and Wood Turning, b 3.....	Mechanical Engineering 1

## SECOND SEMESTER—

Rhetoric and English Composition, a 5.....	English 4
Algebra, a 4.....	Mathematics 4
Roman History, a 3.....	History 4
Library Course, a 1.....	Library 2
Military, 3, or Physical Culture, 2.....	
Elective, 8.....	
Latin, a 5, or .....	Latin 4
Elementary Botany, a 2, b 3.....	Nature Study 2
Forging, Iron and Steel, b 3, or .....	Mechanical Engineering 2
Sewing, b 3.....	Domestic Art 2

## THIRD YEAR

## FIRST SEMESTER—

Composition and English Literature, a 5.....	English 5
Plane Geometry, a 4.....	Mathematics 5
Elementary Physics, a 3, b 2.....	Physics 1
English History, a 3.....	History 5
Library Course, a 1.....	Library 3
Military, 3, or Physical Culture, 2.....	

## SECOND SEMESTER—

Composition and English Literature, a 5.....	English 6
Plane Geometry, a 4.....	Mathematics' 6
Elementary Physics, a 3, b 2.....	Physics 2
English History, a 3.....	History 6
Library Course, a 1.....	Library 4
Military, 3, or Physical Culture, 2.....	

## Preparatory Department

The work of this department is prerequisite to all full courses offered in the institution. The course as it is now arranged is the equivalent of the four years' high school course of the city schools, adopted by the High School Committee. It contains all the constants of that course, except the fourth year in English. Standings from the public schools of the state, at the discretion of the Principal of the department, may be accepted and credit given for the same grade of work completed therein. The students of this department are under the supervision of an experienced member of the faculty, who superintends their work and strives to secure the forming of correct habits of life, on the part of all.

Students will be admitted to this department upon completion of the 8th grade work in the public schools.

The Franklin Literary Society is composed of Preparatory and Short Course students, or students of equal rank. This work is also under the supervision of the principal of the department.

The following courses are offered and are required for completion of the work:

## ENGLISH

## 1 English Composition.

a. Choice of words, meaning of words, preferred usage according to best authorities.

Buehler's Practical Exercises.

2 English Composition.

Prerequisite, Course 1.

a, Kinds of composition; study of description; paragraphing; narration; clearness; letter writing; choice of words; exposition and argument.

Text to be announced.

3 Rhetoric, and English Composition.

This course has two aims: (a) To afford the student practice in composition; (b) to acquaint him with certain masterpieces of literature. For guidance in composition, Gardiner, Kittredge and Arnold's Composition and Rhetoric is used as a text-book. The second object will be attained, in part, by study in class of such classics as Washington's Farewell Address, Arnold's Sohrab and Rustum, Shakespeare's Julius Ceasar; in part by reading outside of the class certain required books, such as Franklin's Autobiography and Scott's Quentin Durward.

4 Rhetoric and English Composition.

A continuation of Course 3.

5 English Literature and Composition.

The work of the preceding year is continued. Among the classics to be read may be named Shakespeare's Merchant of Venice and Ruskin's Sesame and Lilies. Upon these classics the composition work to a great extent will be based. The history of American literature will also be studied.

6 English Literature and Composition.

A continuation of Course 5.

## LIBRARY

With a view to facilitating the student's use of the library the following courses are given:

### Library Work.

- 1 The use of indexes and abbreviations; the card catalogue; classification; use of dictionaries and encyclopedias.
- 2 Periodical indexes; reference books in biography and literature.
- 3 Dictionaries, general encyclopedias, their history and relative value; special encyclopedias.
- 4 Other reference works; state documents; U. S. government publications.

## LATIN

1 Latin.

Primary principles of the language, including inflection and syntax



with special attention to etymology, showing the relation of Latin stems to English words.

Text: *Bellum Helveticum*.

2 Latin.

Continuation of Course 1. *Bellum Helveticum* completed.

3 Latin.

Caesar, Books I, II and III.

4 Latin.

Caesar, Book IV; Cicero, Orations against Cataline, I and II

## HISTORY

1 U. S. History.

Prerequisite, a knowledge of the history of the United States to the Colonial Period.

a. A study of the conditions during the Colonial Period; Revolutionary War and War of 1812; industrial development of our country; the long struggle with slavery; the indestructibility of the Union; the economic struggle; the growth of the Northwest.

Text to be announced.

2 Civics.

a. General principles of government; branches of government; a close study of the constitution; comparison between the principles of the national government and that of our own state; principles of law; contracts in general.

Text to be announced.

3 Greek History.

History of Greece with brief preliminary survey of oriental history. The history of Greece and Rome is regarded as a study of the evolution of Greek and Roman institutions. Events are considered in their bearing on that evolution. A text-book is used, supplemented by other material.

West's Ancient World.

4 Roman History.

History of Rome with special emphasis upon the institutions of the empire. The work of this course includes the period of transition to the year 800 A. D.

West's Ancient World.

5 English History.

History of England to 1485. Emphasis upon constitutional points, and upon those institutions from which our own are derived. Text-book, lectures, papers and reports.

Cheyney's Short History of England.

## 6 English History.

Continuation of Course 5. The Tudors and the Reformation; the Stuarts and Parliament; England under Parliamentary rule; the era of reform; democracy and empire.

Cheyney's Short History of England.

## MATHEMATICS

### 1 Arithmetic.

Prerequisite, knowledge of Arithmetic to percentage.

a. All the principles of percentage; involution; evolution; mensuration and the entire metric system.

Southworth-Stone Arithmetic, Part 3.

### 2 Algebra.

Beginning with the fundamental notions.

Text: Milne's Academic Algebra.

### 3 Algebra.

Continuation of Course 2.

### 4 Algebra.

Continuation of Course 3. A general review of quadratics, the progressions, ratio and proportion, logarithms and such other important topics as the time will permit of taking up.

### 5 Plane Geometry.

Prerequisite, Course 2.

Beginning the subject. Text: Sanders' Plane and Solid Geometry.

### 6 Plane Geometry.

Prerequisite, Courses 3 and 5.

Plane Geometry completed.

## PHYSICS

### 1 Elementary Physics.

Prerequisite, Mathematics 2.

a. Properties of matter, mechanics of solids, and mechanics of fluids; nature of light, intensity, velocity and reflection of light.

b. Laboratory work showing principal phenomena and proving laws governing them in properties of matter, mechanics of solids and mechanics of fluids; velocity of sound, color and reflection of light.

Carhart and Chute's High School Physics.

Chute's Practical Physics—Laboratory Manual.

### 2 Elementary Physics.

Prerequisite, Course 1.

a. Refraction of light, heat, electricity and magnetism.

b. Laboratory work in heat, colorimetry, refraction of light, magnetism, static electricity, detection of electric current and its direction, induced currents and measurement of electrical resistances.

Carhart and Chute's High School Physics.

Chute's Practical Physics—Laboratory Manual.

## MECHANICAL ENGINEERING

### 1 Carpentry, and Wood Turning.

b. Talks on the care and use of different tools. Practice at the bench in making the various joints used in wood construction.

### 2 Forging.

b. Bending, drawing, up-setting, welding and forging iron; steel manipulation, including cold chisels, punches and lathe and planer tools, tempering and hardening.

### 5 Mechanical Drawing.

b. Instrumental drawing, geometrical problems and parts of machines. This work is offered during the entire year, and at hours convenient to teachers and students.

## ZOOLOGY

### 1 Elementary Physiology.

This is offered in the first year of the preparatory course and is designed to meet the requirements for High School physiology. It includes an elementary study of the human body, its physiology, hygiene, and sanitation.

Text: The Human Mechanism, Hough & Sedgwick.

## NATURE STUDY

- 1-2 The work offered in these courses is intended to train the student to observe the beauty of the world in which he lives. It will be elementary in its nature and will follow the methods used in Cornell University, the center of Nature Study in America.

## PHYSIOGRAPHY

- 1 The relation between the earth and the sun; rivers; weathering of soils; glaciers, their cause and action; land forms, their cause and influence on man; volcanoes, the cause and effect; the atmosphere and its importance; the ocean; life on land and sea; how the physical conditions of the earth affect the life of man.

Text to be announced.

## ART

### 1 Free Hand Drawing.

Elementary Course. Drawing from simple casts in charcoal; theory

of perspective; drawing practice in pencil This work is arranged to be of direct assistance to students in their several courses in the college.

## 2 Free Hand Drawing.

Charcoal drawing continued; clay-modelling, from casts and objects; sketching in pencil and pen and ink.

## DOMESTIC ART

### 1 Cooking.

Designed for those who desire a knowledge of practical cookery. This course also includes instruction in care of the kitchen; serving and washing of dishes.

### 2 Sewing.

This course aims to give students an understanding of the stitches and methods employed in plain sewing. Each student is required to make a suit of underwear. This course or its equivalent is a necessary prerequisite to any other course in needlework in the department.

## Commercial

### FIRST YEAR

#### FIRST SEMESTER—

English Composition, a 5.....	English 1
Arithmetic, including Metric System, a 5.....	Mathematics 1
Commercial Geography, a 5.....	Commercial Science 1
Bookkeeping, b 3.....	Commercial Science 2
Military, 3, or Physical Culture, 2.....	
Elective, 4.....	
Elementary Physiology, a 4, b 1.....	Zoology 1
Latin, a 5.....	Latin 1

#### SECOND SEMESTER—

English Composition, a 5.....	English 2
Algebra, a 5.....	Mathematics 2
Civics, a 5.....	History 2
Bookkeeping, b 3.....	Commercial Science 3
Military, 3, or Physical Culture, 2.....	
Elective, 3.....	
Physiography, a 3.....	Physiography 1
Latin, a 3.....	Latin 2

### SECOND YEAR

#### FIRST SEMESTER—

Rhetoric and English Composition, a 5.....	English 3
Algebra, a 4.....	Mathematics 3
Shorthand, a 5.....	Commercial Science 4



---

Library Course, a 1.....	Library 1
Typewriting, 5.....	Commercial Science 5
Military, 3, or Physical Culture, 2.....	
Elective, 5.....	
Latin, a 5, or .....	Latin 3
Elementary Zoology, a 3, b 2.....	Nature Study 1

## SECOND SEMESTER—

Rhetoric and English Composition, a 5.....	English 4
Algebra, a 4.....	Mathematics 4
Shorthand, a 5.....	Commercial Science 6
Library Course, a 1.....	Library 2
Typewriting, 5.....	Commercial Science 7
Military, 3, or Physical Culture, 2.....	
Elective, 5.....	
Latin, a 5, or .....	Latin 4
Elementary Botany, a 2, b 3.....	Nature Study 2

## THIRD YEAR

## FIRST SEMESTER—

English Literature and Composition, a 5.....	English 5
Plane Geometry, a 4.....	Mathematics 5
Elementary Physics, a 3, b 2.....	Physics 1
Elementary Law, a 3.....	Commercial Science 8
Library Course, a 1.....	Library 3
Military, 3, or Physical Culture, 2.....	

## SECOND SEMESTER—

English Literature and Composition, a 5.....	English 6
Plane Geometry, a 4.....	Mathematics 6
Elementary Physics, a 3, b 2.....	Physics 2
Elementary Law, a 3.....	Commercial Science 9
Library Course, a 1.....	Library 4
Military, 3, or Physical Culture, 2.....	

---

## Department of Commercial Science

## PROFESSOR CROSIER

The commercial department occupies commodious quarters on the second floor of the Central Building. These rooms are exceptionally well suited to the work of the department, and supplied with folding desks, typewriters, offices for carrying on business transactions, such as banking and mercantile work.

This course, including both shorthand and business training

subjects, extends through a period of three years, and when the student has satisfactorily completed the work as outlined, he will be given a certificate of graduation, which admits him to the Freshman class of the College. The entrance requirements to this department are the same as for the Preparatory course. Students will be allowed credit for equivalent work done elsewhere, thus enabling him the sooner to complete the work offered. Our aim is to give the specific training necessary, and



*Reading Room.*

as broad a general knowledge as possible, at all times endeavoring to do thoroughly the work in hand. No student will be certified to who fails to give us his best effort and has not attained a general average grade of eighty.

The expenses are the same as for any other work in the institution and far below what is usually charged for such in-

struction. College charges for semester of eighteen weeks are eight dollars, which includes use of typewriter.

For complete schedule of other subjects as related to the work of this department, see Preparatory Department.

The work is as follows:

### FIRST YEAR

#### FIRST SEMESTER

#### 1 Commercial Geography.

This course is designed to acquaint the student with those dominant features of industry which determine the quantity and quality of trade; to trace the various avenues of commerce and show the causes that give them direction and volume, thus enlarging the student's conception of the natural resources and the resultant economic movements which are brought specifically to bear upon every day life.

Adam's Commercial Geography.

#### 2 Book-keeping.

Single and double entry studied as in actual business. Our aim being to acquaint the student in an elementary way with various systems of book-keeping, keeping constantly in mind accuracy and exactness, thus preparing him for the actual practice which is offered later in the year. Penmanship is required with this course.

Benton's High School Edition.

#### 3 Book-keeping.

Each student will carry on regular transactions through six offices with the student body. While all transactions are of the same general nature, the results are different, thus creating in the individual student the habit of self reliance. All work must be of a certain degree of excellency before the next step can be taken. With this course cheques, drafts, notes, copying letters, writing deeds, mortgages, leases, insurance, etc., that would naturally attend same in actual business, are introduced.

### SECOND YEAR

#### FIRST SEMESTER

#### 4 Shorthand.

Consonant stems, vowels, diphthongs, initial and final hooks and circles, word-signs, etc., in logical order; elimination of vocalization through position; the habit of co-ordination emphasized from the beginning; ordinary business letters introduced towards the close of the term.

Graham's Shorthand Book.

#### 5 Typewriting.

Graded exercises on the machine to learn key-board by the touch

method; care of the machine; business letters, law forms, manifolding, mimeographing; department correspondence, speed practice, binding, folding and filing of all kinds of type-written matter. One hour each day.

Any Standard Typewriting Manual.

#### SECOND SEMESTER

##### 6 Shorthand.

General dictation from Brown's Business Correspondence; Humphrey's Typewriting Manual. Law forms of all kinds, general literary selections. The aim of this term is to complete the student's preparation for actual work.

Music's Universal Dictation and Graham's Amanuensis.

##### 7 Typewriting.

One hour each day. All work of this term to be from shorthand notes. The purpose of this is to give the student power to read notes readily and transcribe the same rapidly. It is especially desirable when practicable for the student in shorthand to take typewriting at least two years, as the machine work shows really the finished product of the student's effort. One year is required of all students.

#### THIRD YEAR

##### FIRST SEMESTER

##### 8 Elementary Law.

This course of study is designed to acquaint the student somewhat with those fundamental principles underlying our specific law, thus enabling him to pursue more intelligently legal analysis.

Blackstone and Walker's Law used as reference study.

Robinson's Elementary Law.

##### SECOND SEMESTER

##### 9 Elementary Law.

A topical analysis of contracts; negotiable paper; agency; partnership and corporations; guaranty; sale of chattels; right of stoppage in transit; payment; law of tender; liens; interest and usury; contracts of affreightment; bailment; marine, fire and life insurance; probate matters and real estate conveyances. In connection with this outline a brief study is made of the South Dakota law having reference to these subjects, the student thus acquiring a general knowledge as well as specific application of same. The student is advised to purchase the Civil Code of South Dakota, or, if he does not desire to do this, a type-written copy of the sections used will be furnished at actual cost.

Townsend's Topical Analysis of Commercial Law.



## School of Agriculture

### MEN'S COURSE

#### FIRST YEAR

##### FIRST TERM—

English Composition.....	a 5
Agricultural Botany.....	a 5
Farm Mathematics.....	a 5
Breeds and Judging.....	a 2, b 1
Blacksmithing.....	b 4
Military.....	3

##### SECOND TERM—

English Composition.....	a 5
Agricultural Botany.....	a 5
Farm Accounts.....	a 5
Breeds and Judging.....	a 2, b 1
Carpentry.....	b 4
Military.....	3

#### SECOND YEAR

##### FIRST TERM—

English Composition.....	a 3
Chemistry I (elements and compounds).....	a 5, b 2
Agricultural Physics.....	a 4, b 1
Hygiene and Care of Farm Animals.....	a 3
Crops and Farm Management.....	a 5
Farm Machinery and Farm Motors.....	b 2
Military.....	3

##### SECOND TERM—

English Composition.....	a 3
Chemistry II (agricultural).....	a 4, b 2
Agricultural Physics.....	a 4, b 1
Hygiene and Care of Farm Animals.....	a 3
Crops and Farm Management.....	a 4
Farm Machinery and Farm Motors.....	b 2
Military.....	3

#### THIRD YEAR

##### FIRST TERM—

Chemistry III (feeds and feeding).....	a 3
Dairy Husbandry.....	a 2, b 2
Veterinary Practice.....	a 3, b 1
Fruit Growing.....	a 3
Breeding Live Stock.....	a 5

Entomology.....	a 3
Military .....	3

## SECOND TERM—

Poultry.....	a 3
Dairy Husbandry.....	a 2, b 2
Veterinary Practice.....	a 3, b 1
Vegetable Gardening.....	a 3
Feeding Live Stock.....	a 5
Chemistry IV (soils and fertilizers).....	a 3
Dressing and Curing Meats.....	b 1
Military .....	3

### School of Agriculture

## WOMEN'S COURSE

## FIRST YEAR

## FIRST TERM—

English .....	a 5
Mathematics .....	a 5
Cooking .....	b 2
Sewing.....	b 2
Agricultural Botany.....	a & b 5
Physiology .....	a 3
Physical Culture.....	2
Music .....	a 2

## SECOND TERM—

English .....	a 5
Mathematics .....	a 5
Cooking .....	b 2
Sewing and Drafting.....	b 2
Household Bacteriology.....	a 1, b 2
Home Nursing.....	a 1, b 2
Physical Culture .....	2
Music .....	a 2

## SECOND YEAR

## FIRST TERM—

English .....	a 5
Cooking .....	a 1, b 2
Millinery .....	b 2
Household Economy.....	a 5
Physical Culture.....	2
Drawing—free hand.....	b 4

---

Music .....	a 2
-------------	-----

## SECOND TERM—

English .....	a 5
Household Accounts.....	a 2
Cooking and Serving.....	b 2
Laundering .....	b 2
Sewing.....	b 2
Drawing—Mechanical .....	b 4
Physical Culture .....	2
Music .....	a 2

## THIRD YEAR

## FIRST TERM—

English .....	a 5
Cooking .....	b 2
Chemistry of Food.....	b 2
Ventilation and Sanitation.....	a 5
Dairying .....	b 2
Sewing.....	b 2
Physical Culture.....	2
Music .....	a 2
Social Culture.....	a 1

## SECOND TERM—

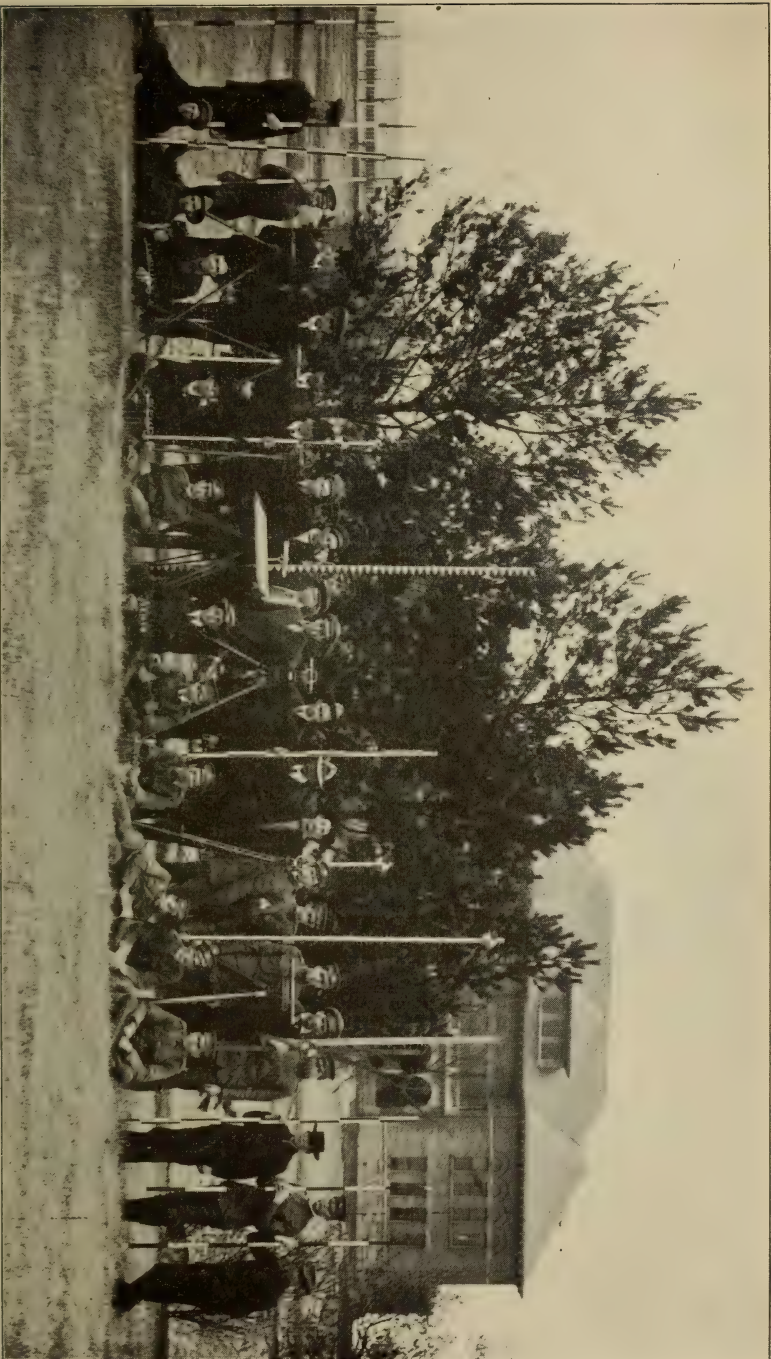
English .....	a 5
Dietetics .....	a 4
Sewing.....	b 2
Home Management.....	a 2
Home Decoration.....	a 2
Physical Culture.....	2
Music .....	a 2
Social Culture.....	a 1

The two courses, offered by the School of Agriculture, are intended to give practical instruction to young men and women who desire to prepare themselves for life on the farm and who are already so employed that they are unable to attend school except during the winter months.

The requirement for admission is completion of the eighth grade in our country schools.

The school year will extend from about November first to April first, the season of the year when the young people can best be spared from the farm.

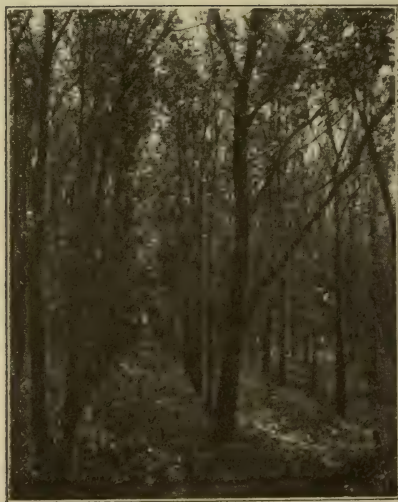
This school will not be opened for instruction before November, 1908. In the fall of 1907 a detailed statement of the



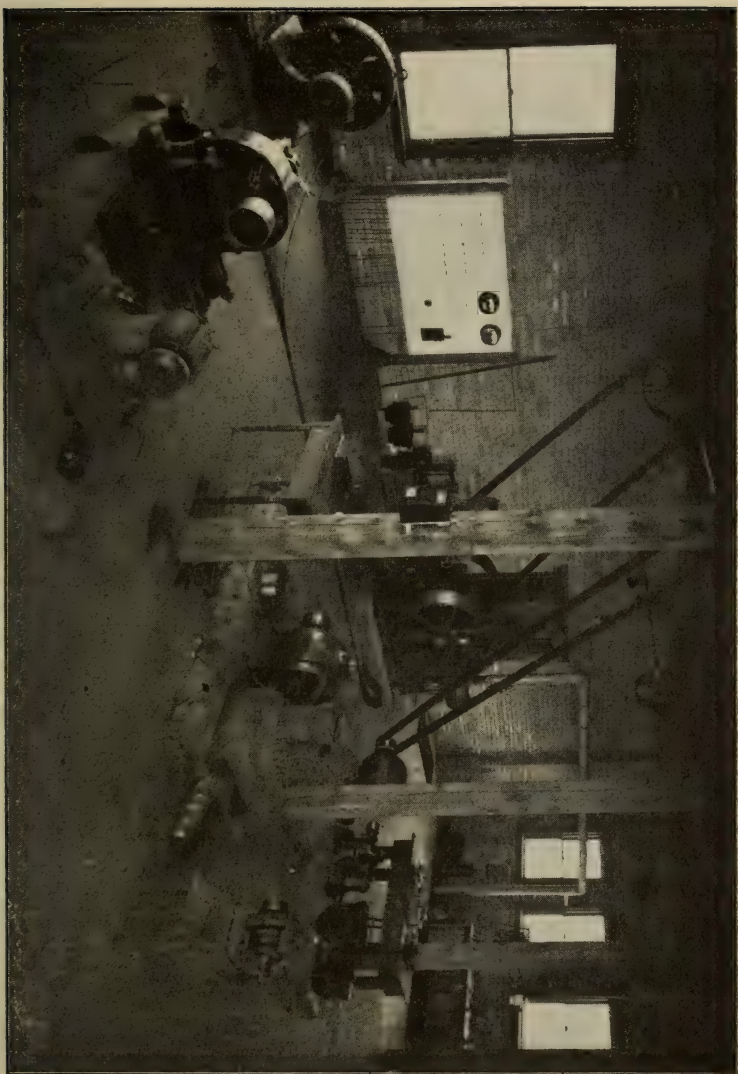
*Civil Engineering Class.*



work of the School of Agriculture will be ready for distribution. Copies will be sent to all persons sending their names and addresses to the President of the College.



*Forest Plot.*



*Dynamo Room.*

## STUDENT ORGANIZATIONS

### INDUSTRIAL COLLEGIAN

Ross Elliott.....	Editor-in-Chief
John Sperb.....	Business Manager

### ATHLETIC ASSOCIATION

John Sperb.....	President
Ralph Chilcott.....	Secretary
Ben Alton.....	Treasurer
Carl Reich.....	President State Inter-Collegiate Athletic Association

### ORATORICAL ASSOCIATION

Aaron Johnson.....	President
Mabel Binnewies.....	Secretary

### BAND

Francis J. Haynes.....	Leader
------------------------	--------

### YOUNG MEN'S CHRISTIAN ASSOCIATION

George C. Phillips.....	President
Fred Bowles.....	Secretary

### YOUNG WOMEN'S CHRISTIAN ASSOCIATION

Edith Hubbart.....	President
Amy Mayland.....	Secretary

### ATHENIAN LITERARY SOCIETY

William R. Coolley.....	President
Loto Underwood.....	Secretary

### MILTONIAN LITERARY SOCIETY

Lindsey Whitehead.....	President
Henrietta Kremer.....	Secretary

### FRANKLIN LITERARY SOCIETY

Joshua Trumm.....	President
Ethel Lawrence.....	Secretary

## ART CLUB

Nellie Kendall.....	President
Edna Bushnell.....	Secretary

## CIVIL ENGINEERS' CLUB

John Furnstahl.....	President
Ralph McKeown.....	Secretary

## LADIES' GLEE CLUB

Francis J. Haynes.....	Conductor
------------------------	-----------

## COLLEGE GLEE CLUB

Francis J. Haynes.....	Conductor
------------------------	-----------

## AGRICULTURAL CLUB

John R. Kirk.....	President
Ralph Chilcott.....	Secretary

## ELECTRICAL ENGINEERING CLUB

W. S. Burch.....	President
Alman Fjerestad.....	Secretary

## BATTALION ROSTER

## FIELD AND STAFF

Major.....	Grant J. Morton
Adjutant.....	J. P. Furnstahl
Quartermaster.....	J. P. Murphy

## NON-COMMISSIONED STAFF

Sergeant Major.....	Geo. B. Atwood
Chief Trumpeter.....	Geo. Phillips
Color Sergeant (National).....	J. B. Estes
Color Sergeant (Battalion).....	W. S. Fickle

## COMPANY "A"

Captain.....	L. W. Whitehead
--------------	-----------------



---

1st Lieutenant.....	Ray W. Roney
2nd Lieutenant.....	Ray W. Hall
1st Sergeant.....	Joshua Trumm
Q. M. Sergeant.....	R. D. Jones
Sergeant.....	J. B. Estes
Sergeant.....	J. R. Fridley
Sergeant.....	Fred Matheny
Sergeant.....	C. D. Johnson
Corporal.....	Harvey Thornber
Corporal.....	N. A. Stacy
Corporal.....	Ervie Buck
Corporal.....	C. Christianson
Musician.....	Edwin Koch

## COMPANY "B"

Captain.....	C. A. Carpenter
1st Lieutenant.....	Joe Swering
2nd Lieutenant.....	Chas. Coughlin
1st Sergeant.....	Robert Watson
Q. M. Sergeant.....	Carl Vernlund
Sergeant.....	Walter Fickle
Sergeant.....	Earl Simmons
Sergeant.....	Owen Hyde
Sergeant.....	Glenn Bryant
Corporal.....	John E. Tyler
Corporal.....	Albert Marske
Corporal.....	Ernest Bacon
Corporal.....	Harold Crothers
Musician.....	C. T. McCoy
Musician.....	J. M. Hall

## COLLEGE ALUMNI

## ALUMNI ASSOCIATION

Shirley P. Miller, '03.....	President
John Nelson, '05.....	First Vice President
Fred A. Coller, '06.....	Second Vice President
Winifred Enos, '01.....	Third Vice President
Hubert B. Mathews, '92.....	Secretary and Treasurer

## GRADUATES

## Master of Science (M. S.)

Aldrich, John M., '91.....	Prof. Biology U. Idaho, Moscow, Io.
Brown, James A., '96.....	Attorney, Lincoln, Neb.
Chilcott, E. C., '98, Agronomist, in charge of Dry Land Agriculture, Department of Agriculture, Washington, D. C.	
Crane, Austin B., '03.....	Civil Engineer, Spokane, Wash.
Davis, Homer, '97.....	Physician, Genoa, Neb.
Griffiths, David, '03, Assistant Agrostologist, Department of Agriculture, Washington, D. C.	
Harkins, Lilla A., '98, Prof. Domestic Science, Montana Agricultural Col., Bozeman, Mon.	
Hepner, Frank E., '02, Assistant Station Chemist, University of Wyoming, Laramie, Wyo.	
Hoy, Howard H., '03.....	Instructor in Phys. and El. Eng., S. D. A. C.
Knox, William H., '01.....	Orange Grower, Fresno, Cal.
Luke, Fred K., '96.....	Farmer, Kalispel, Montana
Lundy, Hattie (Dibble), '99.....	Castlewood
Mathews, Hubert B., '99.....	Prof. of Phys. and El. Eng., S. D. A. C.
Mathews, Eva (Plocker), '94.....	Brookings
McKenney, Dustin W., '89, Principal C. M. Schwab Manual Training School, Homestead, Pa.	
Norton, Frank A., '05.....	Chemist for National Canning Co., Aspinwall, Pa.
Phillips, C. Louise, '01.....	Library Assistant, S. D. A. C.
Parsons, Thomas S., '98.....	Science Teacher, Durango, Col.
Robertson, Ada N., '96.....	Teacher, East Helena, Mont.
Schoppe, W. J. A., '95, Observer, United States Weather Bureau, Iola, Kan.	
Sproul, Alex. H., '95, Head of Commercial Department, Shortridge H. S., Indianapolis, Ind.	
Thompson, Clarence, '04.....	Farmer, Dell Rapids
Thorner, Walter S., '99, Prof. of Horticulture, Washington Agricultural College, Pullman.	
Walter, L. Erving, '04.....	Science Teacher, Germantown, Ohio
Whitehead, Bower T., '01.....	Prof. of Pharmacy, S. D. A. C.
Whitten, John C., '99.....	Prof. Hort. U. Missouri, Columbia

---

Williams, Effie (Snell), '96.....	Florist, Memphis, Neb.
Wileox, Ernest W., '96.....	Farmer, Thawville, Ill.
Wolgemuth, Lee F., '91, Mechanical Engineer, C., St. P., M. & O. Ry., St. Paul, Minn.	

---

**Bachelor of Science (B. S.)**

Adams, Edith (Riemann), '98.....	Antwerp, Belgium
Ainsworth, Cephas B., '97.....	Deputy Treasurer, Aberdeen
Ainsworth, Howard, '98.....	Street Car Conductor, Los Angeles, Cal.
*Aldrich, Ellen (Roe), '89.....	
Aldrich, G. Malcolm, '06.....	County Superintendent, Brookings
Aldrich, Irwin D., '91, Editor and Secretary Regents of Education, Big Stone	
Aldrich, John M., '88.....	Prof. of Biology U. of Idaho, Moscow
*Ellen, Wm. C., '89.....	
Allen, Hart M., '00.....	Drug Clerk, Winters, Cal.
Allison, Wm. F., '96, Prof. Civil Engineering, Colorado School of Mines, Golden.	
Allison, Mabel (Hegeman), '98.....	Golden, Col.
Almond, Fred C., '03, Elec. Eng.....	Fargo, N. D.
*Anderson, Clark W., '00.....	
Arnold, Katie (Boswell), '89.....	Estelline
Atkinson, Jesse C., '96.....	Civil Engineer, Chicago, Ill.
Atkinson, Geo. W., '97.....	Contractor, Springfield
Atkinson, Walter, '97.....	Civil Engineer, Chicago, Ill.
Austin, Steven E., '92.....	Machinist, Iowa
Bagley, Susie, '01.....	Teacher, Chicago
Bates, Edmund T., '93.....	Farmer, Onslow, Iowa
Bacon, Nora (Updyke), '91.....	Pueblo, Col.
Barrett, J. Wylie, '06.....	Electrical Engineer, Mitchell
Beck, Milton, '93.....	Chief Engineer, Alamo Mfg. Co., Hillsdale, Mich.
Beck, Louis, '98, Gasoline Engine Expert, Fairbanks Morse Co., Beloit, Wis.	
Beebe, Jay L., '00.....	Physician, Anaheim, Cal.
Bell, William D., '91.....	Editor, St. James, Minn.
Bentley, Williams S., '91.....	Physician Soldiers' Home, Hot Springs
Binford, William W., '04.....	Civil Engineer, Denver, Colo.
Bolles, Myrick N., '98, Mining and Metallurgical Engineer, Monterey, Mex.	
Bolles, Laura Jane, '01.....	Teacher, Colman
Bonesteel, Bee M., '06.....	Teacher, Brookings
Boyd, Mary, '01.....	Teacher, Brookings
Boyden, Frank E., '97.....	Physician and Surgeon, Brookings
Boyden, Guy L., '05.....	Principal of Schools, Aurora
Boyden, Maude (Hegeman), '98.....	Brookings
Brosseau, Jesse E., '01.....	Medical Student, Chicago, Ill.

---

\*Deceased.

Brown, Cyrus O., '94.....	Attorney, Burwell, Neb.
Brown, Ida (Dibble), '96.....	Lincoln, Neb.
Brown, James A., '94.....	Attorney, Lincoln, Neb.
Brown, Sara, '95.....	Teacher, Shannon City, Ia.
Brooke, Grace (Lawshe), '89.....	Barnesville, Minn.
Bullen, Grace (Young), '97.....	Brookings
Burghardt, Roy D., '06.....	Electrician, Watertown
Carlson, Ella, '00.....	Teacher, Dolph
Carlson, Esther, '00.....	Teacher, St. Paul, Minn.
Carter, Louis W., '96.....	Farmer, Highmore
Carpenter, Abbie J., '06.....	Teacher, Brookings
Chappell, Bessie, '05.....	Teacher, Brookings
Chilcott, Ellery F., '06.....	Special Agent Dept. of Agriculture, Edgerton, N. D.
Cole, John S., '03.....	Special Agent Dept. of Agriculture, Brookings
Clevenger, John W., '97.....	Dentist, Chamberlain
Coller, Fred A., '06.....	Post Graduate Student, S. D. A. C.
Cornell, Harry M., '95.....	Cashier, Russell, N. D.
Crane, Austin B., '91.....	Civil Engineer, Spokane, Wash.
Crane, Elsie (Curtiss), '98.....	Brookings
Crane, May (Cranston), '89.....	Spokane, Wash.
Crane, Margaret (Davidson), '98.....	Spokane, Wash.
Cross, Alvah G., '89.....	
Crowley, Cassie (Madden), '97.....	Fargo, N. D.
Cuckow, Fred W., '03.....	Lawyer, Elkton
Culhane, Michael E., '01.....	Lawyer, Brookings
Culhane, Lillian (Langdon), '01.....	Brookings
Cunningham, Sarah (Haber), '89.....	Spokane, Wash.
Davies, Autumn, '01.....	Instructor in Am. History, High School, Omaha, Neb.
Davies, Gladys, '06.....	Drug Clerk, Letcher
Davies, Mary, '00.....	Instructor History and Literature, Falls City High School, Falls City, Neb.
Davis, Clifford W., '05.....	Farmer, Highmore
Davis, Homer, '91.....	Physician, Genoa, Neb.
Davis, Samuel H., '92.....	Farmer, Plankinton
Day, John M., '90.....	Teacher, Mellette
DeLa, John W. H., '00.....	Editor, Balfour, N. D.
Dillon, Willis C., '91.....	Attorney, Omaha, Neb.
Dibble, Hettie (Doughty), '91.....	Parker
Dodge, Fred E., '01.....	Hotel Keeper, Redfield
Doughty, Matthew W., '00.....	Civil Engineer, Scranton, Penn.
Downing, Jennie C., '96.....	Telephone Operator, Rathdrum, Idaho
Drew, Letta (Colegrove), '03.....	Davenport, N. D.
Edgerton, Wm. M., '93.....	Physician, Faulkton
Egeberg, Hildus, '90.....	Farmer, Brookings
Elliott, Roy K., '05.....	Electrician, West Lynn, Mass.
Else, Earl, '01.....	House Physician, Cook County Hospital, Chicago, Ill.
Eno, Durell G., '89.....	Farmer, Platte



Enos, Winifred, '01.....	Teacher, Brookings
Erickson, Martin L., '01.....	Student in Forestry, Yale
Erstad, Alfred J., '06.....	Electrician, Redding, Cal.
Evans, Edna V., '06.....	Teacher, Brookings
Findeis, Phillip, '99.....	Lumber Merchant, Mirando
Fishback, Myra, '01, Y. M. C. A. Secretary for North Dakota, Brookings	
Fishback, Van Dusen, '05.....	Bank Clerk, Brookings
Fjerestad, Hans C., '98.....	Grocer, Sioux Falls
Fleming, Michael E., '02.....	Auditor Lumber Co., Windom, Minn.
Forrest, Victor E., '05.....	Civil Engineer, Ft. Pierre
Fourt, Fanny (Shannon), '91.....	Fairfield, Ia.
Fulkerson, Vincent, '05, Assistant in Horticulture, School of Agriculture, Minneapolis, Minn.	
George, William A., '02.....	Physician, Evarts
Grace, Oliver, '06.....	Special Agent, Dept. of Agriculture, Dickinson, N. D.
Grady, Francis A., '89.....	Attorney, Red Lake Falls, Minn.
Griffiths, David, '92.....	Assistant Agrostologist, Agr. Dept., Washington
Grattan, Paul H., '96.....	Collector, Elkton
Grove, Frank W., '00.....	Dentist, Wausa, Neb.
Grove, Mary I., '05.....	Teacher, Big Stone
Haasarud, Ole H., '90.....	Farmer, Rushford, Minn.
Haberlein, Alice (Robinson), '91.....	Aguas Calientes, Mex.
Hage, Christian F., '05.....	Lumberman, Toronto
Hamlin, John R., Jr., '92.....	Los Angeles, Cal.
Hann, Jay B., '91.....	Photographer, Bellingham, Wash
Harding, Albert S., '92, Prof. of History and Political Science, S. D. A. C.	
Harding, Neva (Whaley), '97.....	Brookings
Harding, Charles J., '98.....	Teacher, Brookings
Harkins, Lilla A., '90, Prof. of Dom. Sci. Montana Agricultural College, Bozeman.	
Hart, Bertrand M., '02.....	Physician, Blunt
Harza, Carl, '00.....	Electrician, Detroit, Mich
Harza, LeRoy Francis, '01, Asst. Hydraulic Laboratory, Univ. of Wisconsin, Madison.	
Hatfield, Ira H., '92.....	Attorney, Lincoln, Neb.
Hatton, John Henry, '01, Division of Forestry, Department of Agriculture, Washington.	
Hazel, Flora (Ainsworth), '98.....	Aberdeen
Hazel, William A., '97.....	Deputy Sheriff, Aberdeen
Hegeman, Harry A., '96, First Lieutenant 19th Infantry, U. S. A., Manila, P. I.	
Hepner, Frank E., '02, Asst. Station Chemist Univ. of Wyoming,....	Laramie
Hewes, Lulah (Wellman), '88.....	Mayville, N. Y.
Hodgeson, Gustava (Olson), '00.....	Washington, D. C.
Hodgeson, Herbert H., '98.....	U. S. Geol. Survey, Washington, D. C.
Holm, Andrew B., '96.....	Pharmacy Student, S. D. A. C.
Hopkins, Mrs. C. G., '94.....	Champaign, Ill.

- Hopkins, Cyril G., '90. Prof. of Agronomy, Chemist, and Vice Director of U. S. Experiment Station, U. of Illinois, Champaign.
- Houston, Grant, '91.....Physician, Joliet, Ill.
- Howg, Edwin M., '05.....Medical Student, Chicago, Ill.
- Hoy, Nora (Mathews), '96.....Brookings
- Hoy, Howard H., '06.....Asst. in Phys. and El. Eng., S. D. A. C.
- Hubbart, Minnie E., '03.....Teacher, White
- \*Husted, Harley H., '97.....
- Irish, Henry C., '91, Superintendent Missouri Botanical Gardens, St. Louis
- Irish, Maggie (Duffey), '90.....St. Louis, Mo.
- Jerkins, John C., '90.....Attorney, Brookings
- Jensen, Lewis N., '05.....Law Student, Lincoln, Neb.
- Johnson, Carl L., '05.....Electrician, Schenectady, N. Y.
- Johnson, Clara (Johnson), '02.....Volga
- \*Johnson, Edward, '02.....
- Johnson, Isaac, '03.....Lumberman, Volga
- Jolley, Wm. G., '97.....Teacher, Faulkton
- Keeney, Emma A., '92.....Physician, Albert Lea, Minn.
- Kelton, Maude (Bushnell), '04.....Henry
- Kendall, Clinton D., '00.....Druggist, Brookings
- Kendall, Leonard J., '01.....Telegraph Operator, Brookings
- Kendall, M. Krete, '03.....Brookings
- Kennard, Frank L., '06, Special Agent Dept. of Agriculture, Amarillo, Tex.
- Kennedy, C. LeRoy, '01.....Bank Clerk, Madison
- Kenyon, Arthur H., '90.....Lawyer, Spokane, Wash.
- Kephart, George, '02.....Superintendent City Schools, Beresford
- Knox, Arthur H., '06.....Farmer, Alpena
- Knox, Wm. H., '98.....Orange Grower, Fresno, Cal.
- Knox, Elinor (Williams), '94.....Fresno, Cal.
- Koch, Arthur E., '06.....Asst. in Chemistry, S. D. A. C.
- Korstad, Hans, '89.....Editor, Brookings
- Korstad, Mary, '96.....Missionary, Brookings
- Langdon, Alice, '03.....Teacher, Parker
- Lawrence, Mary M., '99.....Teacher, Exa, Wash
- Lawrence, Wm. H., '99, Instructor in Botany and Asst. Botanist in Exp. Station, State College, Pullman, Wash.
- Lawrence, Claude W., '98, Instructor in Agronomy and Cerealist of the Ex. Station, State College, Pullman, Wash.
- Lawrence, Clay, '98.....Lawyer, Seattle
- Lawrence, Phillip A., '88.....Attorney, Brookings
- Lawrence, Jessie, '00.....Instructor in High School, Snohomish, Wash.
- Larson, Lars K., '89.....Bank Cashier, Dell Rapids
- Lee, Berton E., '02.....Druggist, Toronto
- Lee, Rhoda (Johnson), '01.....Toronto
- Lewis, Perry, '91.....Tinner, Mankato, Minn.
- Loucks, Anna Y., '04.....Teacher, Altruria
- Loucks, Della (Fassett), '05.....Watertown

---

Luke, Fred K., '94.....	Farmer, Kalispel, Mont.
Lundy, Hattie (Dibble), '94.....	Castlewood
Lusk, Willard C., '96.....	Editor, Yankton
Mason, Nellie (Mason), '99.....	Albia, Ia.
Madden, Margaret, '92.....	Teacher, Brookings
Mathews, Alice M., '00.....	Teacher, Brookings
Mathews, Eva (Plocker), '92.....	Brookings
Mathews, Harry E., '05.....	Forester, Las Vegas, Nev.
Mathews, Hubert B., '92, Prof. of Physics and Electrical Eng., S. D. A. C.	
Mathews, Roscoe A., '00.....	Civil Engineer, Great Falls, Mont.
Mattice, Albert F., '04.. Medical Student, Johns Hopkins U., Baltimore, Md.	
Merrick, Mable (Mayland), '95.....	Severance, Kan.
McAndrew, James E., '92.....	Farmer, Iroquois
McElmurry, Loretta, '01.....	Teacher, Brookings
McGarry, Lawrence R., '04.....	Principal of Schools, Mansfield
McKenney, Dusten W., '89, Principal C. M. Schwab Manual Training School, Homestead, Pa.	
*McLouth, Ida B., '92.....	
McLouth, Benjamin F., '93.....	Insurance, Hartford, Conn.
McLouth, Lewis C., '89.....	Manufacturer, Detroit, Mich.
Miller, Ralph L., '05.....	Lumberman, Carrington, N. D.
Millett, Mary (Frick), '91.....	Rochester, Minn.
Miller, Shirley P., '03.....	Assistant in Zoology, S. D. A. C.
Moffatt, Margaret E., '06.....	Teacher, Brookings
Moore, Anna (Parker), '95.....	Brookings
Mork, Albert A., '89.....	Farmer, Des Lacs, N. D.
Mork, Theodore, '01.....	Farmer, Des Lacs, N. D.
Morrison, Freda C., '00.....	Teacher, Vermillion
Murphy, Matt W., '05.....	Stenographer, Pierre
Nachtigal, Isaac, '99.....	County Superintendent, Parker
Nelson, Ina (Colegrove), '99.....	Brookings
Nelson, John Harland, '05.....	Assistant in Mathematics, S. D. A. C.
Norton, Frank A., '03... Chemist for National Canning Co., Aspinwall, Penn.	
Olson, Callie (Williams).....	Brookings
Olson, Eva, '97.....	Brookings
Otterness, Jens M., '03.....	Stenographer, Amery, Wis.
Orcutt, Carrie (Ross), '89.....	Northfield, Minn.
Paddock, Jay M., '98.....	Farmer, Aurora
Parsons, Thomas S., '97.....	Science Teacher, Durango, Col.
Peirce, E. Esther, '03.....	Teacher, Milbank
Phillips, Florence, '01.....	Teacher, Brookings
Phillips, C. Louise, '01.....	Library Assistant, S. D. A. C.
Pyne, Estel W., '90.....	Sec. and Treas. Pyne Music Co., Santa Anna, Cal.
Ramsey, Henry J., '02, Asst. in Plant Pathology, Univ. of California, Berkeley, Cal.	
Reich, Rose M., '06.....	Teacher, Brookings
Robertson, Ada N., '93.....	Teacher, East Helena, Mont.

- Robertson, Clarence H., '93, Science Teacher and Missionary, Nan King China.
- Robertson, Edith, (Salisbury), '95..... Nan King, China
- Roe, Guy W., '90..... Superintendent Union Fibre Co., Winona, Minn.
- Roe, Robert, '97..... Stockman, Highmore
- Rogers, Edmund, '89..... Machinist, Milwaukee, Wis.
- Ronning, Oscar E., '05..... Teacher, Sisseton
- Roskie, George W., '02..... Abstractor, Madison
- Roskie, Lina (Evans), '01..... Madison
- Ruth, Thomas H., '04..... Veterinary Surgeon, DeSmet
- Sanborn, Ethel I., '03..... Student, Vermillion
- Sanderson, Everett G., '04..... Farmer, Arapahoe, Col.
- Sarvis, Roscoe J., '03..... Principal of Schools, Wessington
- Sasse, Ernest G., '96..... Physician, Lidgerwood, N. D.
- Saylor, Christie (Hargis), '97..... Elmo, Mo.
- Saylor, Marcus A., '86, Prof. of Mining and Irrigation Engineering, New Mexico School of Mines, Socorro.
- Schaphorst, William F., '05..... Assistant in Mech. Eng., S. D. A. C.
- Schlosser, Thomas F., '92..... Clergyman, Almira, Wash.
- Schoppe, W. J. A., '93..... Observer U. S. Weather Bureau, Iola, Kan.
- Scott, Anna (Wardall), '89..... Physician, Seattle, Wash.
- Seeger, Adolph M., '05..... Electrician, West Lynn, Mass.
- Seide, Louise W. M., '03..... Teacher, Milbank
- Sevy, Isaac B., '95..... Clergyman, Sioux Falls
- Sevy, Orpha (West), '97..... Sioux Falls
- Shuster, John W., '97, Asst. Prof. Elec. Eng. Univ. of Wisconsin, Madison
- Sherwin, Ralph L., '04..... Civil Engineer, Scranton, Pa.
- Sherwin, Howard, '99..... Civil Engineer, New York, N. Y.
- Sherwin, Sara (Davies), '00..... New York, N. Y.
- Slocum, Ina S., '05..... Music Teacher, Vancouver, B. C.
- Smith, Alta (Mathews), '96..... Indian Springs, Nev.
- Smith, William H., '04..... Student, Huron
- Solberg, Halvor C., '91, Prof. Steam and Mechanical Engineering, S. D. A. C.
- Spooner, Jennie (Chamberlain), '91..... Physician, South Haven, Mich.
- Spooner, Fannie (Parker), '94..... Great Falls, Montana
- Sproul, Alex. H., '94, Head of Commercial Department Shortridge High School, Indianapolis, Ind.
- Sproul, William T., '95, Secretary and Treasurer, Ingersoll Milling Machine Company, Rockford, Ill.
- Stoner, Minnie A., '90, Prof. of Domestic Science, University of Ohio, Columbus.
- \*Tanzy, Marvin F., '94.....
- Thogerson, Arthur A., '05..... Commercial Student, S. D. A. C.
- Thompson, Clarence, '04..... Farmer, Dell Rapids
- Thornber, Jessie B., '06..... Teacher, Elkton
- Thornber, John J., '95..... Prof. of Botany U. of Arizona, Tucson



---

Thornber, Wm. T., '98.....	Farmer, Brookings
Thornber, Mary Edith, '02.....	Asst. in Dom. Science, S. D. A. C.
Thornber, Walter S., '97, Prof. of Horticulture, State College, Pullman, Wash.	
Trooien, Ole N., '02.....	Student, Madison, Wis.
Torrence, Nettie (Sloan), '92.....	Redlands, Cal.
Towne, Addie (Loveland), '98.....	Minneapolis, Minn.
Towne, Judson R., '98, Instructor in Physics, East Side High School, Minneapolis, Minn.	
Valleau, Vinal B., '91, Supt. Southern Division Am. Express Co., St. Louis, Mo.	
Walter, L. Erving, '04.....	Science Teacher, Germantown, O.
Walters, Daisy, '05.....	Bruce
Walters, Edith, '99.....	Merchant, Bruce
Walters, William H., '97.....	Grain Buyer, Bruce
Wardall, Norman M., '90.....	Real Estate, Huron
Waters, George D., '94.....	Traveling Salesman, Madison
Webster, James L., '03.....	Minister, Morris, Ill.
Wellington, Ellen (Brownell), '06.....	Interior
Wesche, Abbie (Ross), '89.....	Webb, Ia.
West, Hugh H., '91.....	Physician, Elgin, Ill.
West, George H., '99.....	Physician, Marengo, Ia.
Westcott, George R., '03, Registrar and Asst. in Wood Shops, S. D. A. C.	
White, Alice (Barton), '98.....	Brookings
Whitehead, Bower T., '97.....	Prof. of Pharmacy, S. D. A. C.
Whitten, John C., '92.....	Prof. of Horticulture U. of Missouri, Columbia
Wilcox, Alice E., '97.....	Teacher, Thawville, Ill.
Wilcox, Ernest N., '95.....	Farmer, Thawville, Ill.
Williams, Effie (Snell), '92.....	Florist, Memphis, Neb.
Williams, Harry, '05.....	Bank Clerk, Brookings
Williams, Percy, '05.....	Drug Clerk, Milbank
Williamson, Albert, '96.....	Editor, Oacoma
Wilson, Elsie (Chappell), '04.....	Brookings
Winegar, Albert J., '92.....	Draughtsman, Fairbanks Morse Co., Beloit, Wis.
Winegar, Laura, '02.....	Book-keeper, Arlington
Wolgemuth, Lee E., '91, Mechanical Engineer, C., St. P. M. & O. Ry., St. Paul, Minn.	
Work, Lloyd E., '97, Advertising Man with Chicago Inter-Ocean, Chicago	
Young, Gilbert A., '94, Assistant Professor of Mechanical Engineering, Purdue University, LaFayette, Ind.	
*Young, Maggie (Cranston), '03.....	
Youngberg, Guy E., '06.....	Asst. Clerk of Courts, Brookings

---

#### Pharmacy Graduates (Ph. G.)

Allison, Harold, '06.....	Drug Clerk, Denver, Col.
Allison, Wm. F., '02.....	Prof. of Civ. Eng. Colorado School of Mines, Golden

Anderson, Ernest, '04.....	Drug Clerk, Brookings
Bentley, Wm. S.....	Physician Soldiers' Home, Hot Springs
Bergeim, Olaf, '06.....	Student S. D. A. C.
Briggs, Elmer E., '95.....	Farmer, Muscoda, Wis.
Brosseau, Jesse E., '00.....	Physician, Chicago, Ill.
Baldwin, Corwin B., '00.....	Drug Clerk, Rapid City
Boyden, Frank E., '02.....	Physician and Surgeon, Brookings
Beebe, Jay L., '98.....	Physician, Anaheim, Cal.
Carr, George, '99.....	Druggist, Flandreau
Christianson, Bennett C., '02.....	Druggist, Volga
Connell, John C., '00.....	Druggist, Luverne
Cotter, J. C., '96.....	Farmer, Dell Rapids
Cornell, Edward, '01.....	Drug Clerk, Huron
Clevenger, J. W., '98.....	Dentist, Chamberlain
Crowley, D. C., '99.....	Insurance Agent, Fargo, N. D.
Dillon, Cornelius, '04.....	Drug Clerk, Sicux Falls
Drew, Arthur W., '03.....	Druggist, Davenport, N. D.
Else, Earl, '00.....	House Physician, Cook County Hospital, Chicago, Ill.
*Eckert, Henry, '00.....	
Fjerestad, Carl, '05.....	Druggist, Elkton
Frick, Harry E., '04.....	Drug Clerk, Redfield
George, Wm., '00.....	Physician, Evarts
Goodale, Alton R., '04.....	Drug Clerk, Aberdeen
Grove, Eugene, '96.....	Physician, Hetland
Hall, Roy J., '03.....	Druggist, Oldham
Harben, Bartlett L., '06.....	Drug Clerk, Platt
Hayter, McPherson, '02.....	Farmer, Brookings
Hepner, Frank, '99, Assistant Station Chemist, U. of Wyoming, Laramie	
Hart, Bertrand, '00.....	Physician, Blunt
Heston, Edward C., '03.....	Medical Student, Chicago
Holsey, Joseph, '98.....	Druggist, Veblen
Hollister, Arthur R., '03.....	Druggist, Erwin
Hooker, Henry, '04.....	Medical Student, Chicago
Howell, John E., '03.....	Drug Clerk, Sioux Falls
Howg, Edwin M., '05.....	Medical Student, Chicago
Johnston, Samuel E., '03.....	Druggist, Henry
Jones, Robert, '00.....	Druggist, Madison
Jarrett, Arthur A., '02.....	Druggist, Bristol
Jarvis, Hall S., '02.....	Druggist, Faulkton
Kendall, Clint D., '99.....	Druggist, Brookings
Knox, Wm. H., '95.....	Orange Grower, Fresno, Cal.
Koch, Arthur E., '04.....	Student, Brookings
Larson, Lars P., '05.....	Drug Clerk, Howard
Leighty, James A., '02.....	Druggist, Winfred
Lee, Berton E., '98.....	Druggist, Toronto
Locke, Chas. A., '06.....	Drug Clerk, Brookings
Lentz, Elmer A., '95.....	Dentist, Brookings

---

Lindsey, Chas., '99.....	Stockman, Midland
Mathews, Harry E., '05.....	Forester, Las Vegas, Nev.
McCurdy, Walter, '05.....	Druggist, Lane
Morton, Grant J., '05.....	Student, S. D. A. C.
Morton, Frederic M., '02.....	Drug Clerk, Sisseton
Moore, Thomas, '96.....	Druggist, Sioux Falls
*Murphy, Wm., '95.....	
Norton, Frank A., '03, Chemist National Canning Co., Aspinwall, Penn.	
Oulton, Frank, '99.....	Real Estate, Faulkton
Palmer, Horton, '96.....	Druggist, White
Piekles, Chester E., '02.....	Druggist, Bradley
Pottinger, George, '05.....	Drug Clerk, Dell Rapids
Ramsdell, Leonard C., '04.....	Druggist, Beresford
Schnaidt, Henry, '02.....	Druggist, Parkston
Schroeder, Anna C., '02.....	Clerk, Howard
Sherwin, Frank, '96.....	Farmer, Brookings
Shriver, E. M., '99.....	Druggist, Elkton
Steiner, Frederick W., '03.....	Medical Student, Baltimore, Md.
Taylor, C. DeWitt, '99.....	Drug Clerk, Denver, Colo.
Thomas, John C., '02.....	Drug Clerk, Wakonda
Thompson, Clarence, '05.....	Farmer, Dell Rapids
Thompson, Godfrey, '04.....	Medical Student, Philadelphia, Pa.
Tidball, Clyde, '01.....	Drug Clerk, Brookings
Trumm, Robert E., '03.....	Druggist, Hazel
Van Dusen, Fred J., '03.....	Drug Clerk, Lake Preston
Volin, Porter, '05.....	Drug Clerk, Yankton
Weisflock, Theodore, '04.....	Drug Clerk, Redfield
West, Hugh H.....	Physician, Elgin, Ill.
Whitehead, B. T., '95.....	Prof. Pharmacy, S. D. A. C
Williams, Percy, '03.....	Drug Clerk, Brookings
Wipf, Michael J., '06.....	Drug Clerk, Freeman
Young, Alfred J., '03.....	Druggist, Oakes, N. D.

---

#### GRADUATE STUDENTS

Coller, Fred A.....	Pharmacy.....	Brookings
Grace, Oliver J.....	Agriculture.....	Woonsocket
Koch, Arthur E.....	Chemistry.....	Brookings
Westcott, G. R.....	Civil Engineering.....	Brookings

#### SENIORS

Binnewies, Mabel E.....	General Science.....	McCurdy
Briggs, Stephen F.....	Electrical Engineering.....	Watertown
Burch, Walter S.....	Electrical Engineering.....	Howard
Christianson, Christine.....	Domestic Science.....	Volga

Dillman, Arthur C.....	General Science.....	Revillo
Dutcher, R. Adams.....	General Science.....	Brookings
Elliott, Bruce A.....	Electrical Engineering.....	Brookings
Elliott, Ross W.....	Electrical Engineering.....	Brookings
Fjerestad, Alman.....	Electrical Engineering.....	Estelline
Gagel, Gerald.....	General Science.....	Brookings
Hofstetter, George.....	Mechanical Engineering.....	Mitchell
Johnson, Aaron G.....	General Science.....	Brookings
Kirk, John R.....	Agriculture.....	Springfield
Knutson, Mabel A.....	Domestic Science.....	Brookings
McCordie, Clare.....	Electrical Engineering.....	Groton
McElmurry, Rilla.....	Domestic Science.....	Brookings
Morton, Grant J.....	General Science.....	Toronto
Reich, Carl J.....	Electrical Engineering.....	Tunnel City, Wis
Salmon, Cecil.....	Agriculture.....	Spencer
Sanderson, Eugene W.....	Electrical Engineering.....	Brookings
Tuttle, Volney J.....	Electrical Engineering.....	Madison
Underwood, Genevieve M.....	General Science.....	Brookings
Westcott, Ruth M.....	General Science.....	Brookings
Work, Mary L.....	General Science.....	Watertown

## JUNIORS

Alton, Benjamin H.....	Pharmacy.....	Brookings
Bergeim, Olaf.....	Pharmacy.....	Brookings
Brown, Chas. H.....	Agriculture.....	Brookings
Carpenter, Clarence A.....	Electrical Engineering.....	Sioux Falls
Chilcott, Ralph W.....	Agriculture.....	Brookings
Cooley, William R.....	Agriculture.....	Tabor
Griffith, T. Edwin.....	Electrical Engineering.....	McCook
Holsey, Ernest.....	Electrical Engineering.....	Canton
Hubbart, Edith J.....	General Science.....	Brookings
Hyde, Hallie W.....	General Science.....	Brookings
Jensen, Harvey T.....	General Science.....	Brookings
Kelly, Amy.....	Domestic Science.....	Brookings
Kendall, Nellie G.....	General Science.....	Brookings
Kremer, Henrietta L.....	General Science.....	Brookings
Locke, Francis J.....	Electrical Engineering.....	Castlewood
Mathews, Oscar R.....	General Science.....	Brookings
Mayland, Amy.....	General Science.....	Brookings
Mayland, George R.....	Civil Engineering.....	Brookings
Nelson, Aaron L.....	Electrical Engineering.....	Ellendale, N. D.
Nilsson, Edward.....	Electrical Engineering.....	Gary
Odland, Lewis R.....	Electrical Engineering.....	Beach, N. D.
Olberg, Fred C.....	General Science.....	Brookings
Perry, Will J.....	Electrical Engineering.....	Brookings
Soreng, Edgar M.....	Electrical Engineering.....	Dexter



---

Sperb, John J.....	Civil Engineering.....	Tyndall
Ulrich, Darwin W.....	Electrical Engineering.....	Fountain City, Wis
Underwood, Beatrice C.....	Domestic Science.....	Brookings
Underwood, Loto R.....	Domestic Science.....	Brookings
West, Florence E.....	General Science.....	Brookings
West, Frances E.....	General Science.....	Brookings
Whitehead, Lindsey W.....	General Science.....	Brookings
Williams, Ruby.....	General Science.....	Brookings

### SOPHOMORES

Atkinson, Fay.....	Civil Engineering.....	White
Bacon, Eva F.....	General Science.....	Brookings
Bond, William H.....	Agriculture.....	Alexandria
Bowles, Fred C.....	Electrical Engineering.....	Groton
Brady, Frank A.....	Pharmacy.....	Waubay
Bushnell, Edna J.....	Domestic Science.....	Brookings
Camp, Fred H.....	Electrical Engineering.....	Ree Heights
Catlett, Winifred F.....	Domestic Science.....	Brookings
Clarke, Roy J.....	Electrical Engineering.....	Howard
Cole, Jessie.....	General Science.....	Brookings
Coughlin, Charles.....	Electrical Engineering.....	Carthage
Dexter, David F.....	Pharmacy.....	Centerville
Erwin, Ada B.....	Domestic Science.....	Brookings
Evans, Iva M.....	Domestic Science.....	Brookings
Furnstahl, John P.....	Civil Engineering.....	Howard
Gray, Frank F.....	Pharmacy.....	Townshend, Vt.
Hoel, Rudolph.....	Electrical Engineering.....	Canby, Minn.
Hyde, Owen R.....	Electrical Engineering.....	Brookings
Jones, Robert D.....	General Science.....	Reville
Kartrude, Inga M.....	Pharmacy.....	Hardwick, Minn.
Kremer, Alvin V.....	General Science.....	Brookings
Lane, A. Lloyd.....	Electrical Engineering.....	Alcester
Lloyd, Robert E.....	Electrical Engineering.....	Brookings
McKeown, Ralph.....	Civil Engineering.....	Elkton
Marquis, Sydney.....	Mechanical Engineering.....	Clear Lake
Matheny, Chester.....	Electrical Engineering.....	Turton
Mattice, Clyde M.....	Pharmacy.....	Sedro-Wooley, Wash.
Moffatt, Gladys.....	Domestic Science.....	Brookings
Morrison, Guy E.....	Agriculture.....	Top Bar
Newton, Samuel R.....	Electrical Engineering.....	Britton
Palm, Ellen A.....	Domestic Science.....	Castlewood
Parry, Hiram G.....	Civil Engineering.....	Victor, Colo.
Peirce, Ruth J.....	General Science.....	Brookings
Phillips, George C.....	Electrical Engineering.....	Webster
Pritchard, Lyle H.....	Electrical Engineering.....	Watertown
Roney, Ray W.....	Pharmacy.....	Sioux Falls

---

Sanborn, Harvey W.....	Civil Engineering.....	Clear Lake
Sarvis, Johnson T.....	General Science.....	Brookings
Sperb, Frank H.....	Civil Engineering.....	Tyndall
Swering, Joe B.....	Electrical Engineering.....	Brookings
Throop, Lotta M.....	General Science.....	Brookings
Treacy, Timothy C.....	General Science.....	De Smet
Vernlund, Carl.....	Agriculture.....	Astoria
Watson, Robert S.....	Mechanical Engineering.....	Mitchell
Weeks, Gordon A.....	Electrical Engineering.....	Yankton
Welker, V. E.....	Electrical Engineering.....	Redfield
White, Orland E.....	Horticulture.....	Delmont
Wickre, Jacob O.....	Agriculture.....	Webster
Wright, Mary M.....	General Science.....	DeSmet
Yocom, Frank W.....	Electrical Engineering.....	Parker

**FRESHMEN**

Anderson, Edith.....	General Science.....	Ashton
Barber, Floyd F.....	Civil Engineering.....	Alpena
Biggar, H. Howard.....	Civil Engineering.....	Aurora
Bisbey, Guy N.....	Electrical Engineering.....	Brookings
Blakely, Herbert.....	Pharmacy.....	Brookings
Bryant, Glenn A.....	Agriculture.....	Andover
Catlett, Marguerite H.....	General Science.....	Brookings
Champlin, Manley J.....	General Science.....	Faulton
Clough, Eva H.....	Commercial.....	Madison
Coller, Helen A.....	General Science.....	Brookings
Comstock, Lula Z.....	General Science.....	Brookings
Crothers, Harold M.....	General Science.....	Brookings
Crothers, Ralph L.....	Civil Engineering.....	Brookings
Davison, Frances M.....	Commercial.....	Brookings
Dewing, Litta.....	Commercial.....	Brookings
Dott, Bertram T.....	Pharmacy.....	Salem
Doughty, Clifton E.....	Civil Engineering.....	White
Erwin, Ruth E.....	General Science.....	Brookings
Estes, Jesse B.....	Commercial.....	Beloit, Wis.
Evans, Hazel.....	General Science.....	Aurora
Fickle, Walter L.....	Agriculture.....	Blunt
Foote, Jennie E.....	Commercial.....	Athens, Mich.
Fridley, Bess.....	General Science.....	Brookings
Fridley, Leonard J.....	Commercial.....	Turton
Fridley, J. Ray.....	Electrical Engineering.....	Turton
Grotta, Edwin B.....	General Science.....	Esmond
Hal, Lee M.....	Electrical Engineering.....	Mound City
Hall, Mabelle D.....	General Science.....	Brookings
Hall, Nellie M.....	Commercial.....	Brookings
Hall, Ray W.....	Agriculture.....	Mound City
Hallen, Harold O.....	Commercial.....	Brookings

---

Huntmer, Percy	General Science	Madison
Johnson, Charles H.	Civil Engineering	Hetland
Johnson, Millie C.	General Science	Hardwick, Minn.
Keller, Flora B.	General Science	Manchester
Kelly, Thomas B.	General Science	Brookings
Koch, Edwin E.	Pharmacy	Eureka
Lee, Myrtle	General Science	Brookings
Lorimer, Myrtle M.	Commercial	Brookings
Lothrop, Elmer M.	Electrical Engineering	Academy
Loucks, Daniel K.	General Science	Altruria
McCoy, Claude L.	General Science	Brookings
Matheny, Fred C.	Civil Engineering	Conde
Melum, Edward E.	Civil Engineering	Chicago, Ill.
Morris, Effie M.	Domestic Science	Brookings
Morrison, Joseph D.	Agriculture	Top Bar
Murphy, James P.	Pharmacy	Montrose
Nagel, Herman T.	Agriculture	Berlin, Germany
Nicholson, Lida M.	General Science	Brookings
Ort, Albert A.	Civil Engineering	Verdi, Minn.
Palm, Andrew W.	General Science	Castlewood
Palmer, Harriet	General Science	Brookings
Paul, Walter R.	Electrical Engineering	Brookings
Pembroke, Percy	General Science	Pittsburg, Pa.
Peterson, Helen B.	General Science	Brookings
*Poage, Alonzo A.	Electrical Engineering	Bancroft
Randall, Frank E.	Mechanical Engineering	Brookings
Sargent, Ray	Civil Engineering	Hurley
Sexauer, Elmer	Civil Engineering	Brookings
Sheldon, Nettie E.	Domestic Science	Brookings
Shepard, Helen	General Science	Brookings
Sherin, Harry C.	Pharmacy	Watertown
Sherwin, Muriel	Domestic Science	Brookings
Skinner, Lila M.	General Science	Brookings
Sloan, Roy A.	Commercial	Brookings
Spencer, Lyle S.	Pharmacy	Watertown
Swanson, M. Elizabeth	Commercial	Brookings
Thornber, Harvey	General Science	Brookings
Toy, Victor E.	Commercial	Andover
Tyler, John E.	Civil Engineering	Hartford
Wahl, William W.	Civil Engineering	Columbia
Waltz, P. Ward	Electrical Engineering	Brookings
Welch, Cecile I.	General Science	Brookings
West, Harold R.	Civil Engineering	Brookings
Williams, Losey J.	Pharmacy	Watertown
Williams, Wilbur G.	Pharmacy	Elkton

---

\*Deceased.

---

Wohlheter, Vern G.....	General Science.....	White
Worden, Edith.....	Commercial.....	Lake Benton. Minn.

## SUB-FRESHMEN

Alrick, Thea.....	Brookings
Atwood, George B.....	Erwin
Bacon, Ernest V.....	Brookings
Bacon, Harry W.....	Brookings
Beals, George D.....	Ipswich
Bem, Robert O.....	Olivet
Bentley, Ray L.....	Colman
Bogert, Theodore L.....	Evanston, Ill.
Brady, Charles E.....	Herreid
Brooks, William S.....	Mansfield
Buck, Ervin R.....	Frankfort
Burgess, Norman J.....	White
Casley, Lula.....	Brookings
Christianson, Christian.....	Flandreau
Christie, Clara.....	Volga
Coakley, Manning.....	Flandreau
Donaldson, D. Neill.....	Brookings
Finley, P. Vollmar.....	Miller
Fridley, Richard C.....	Turton
Goddard, Robert S.....	Warnecke
Gosling, Harold C.....	Mound City
Grotta, Bessie O.....	Esmond
Gullick, Luella.....	Brookings
Hanse, Edwin M.....	Webster
Heiser, Agnes C.....	White
Hill, Charles W.....	Sioux Falls
Hively, Elmer.....	Egan
Hoy, Harry A.....	La Delle
Johnson, Clifford D.....	Broadland
Johnson, Mary A.....	Brookings
Keland, Olaf I.....	Brookings
Kilpatrick, Andrew V.....	Houghton
Kleppin, George P.....	Lane
Lawrence, Ethel.....	Doland
Leighty, Frank S.....	Brookings
Lindskog, Clement G.....	Bruce
Lindskog, Telia A.....	Bruce
McCullough, Wesley H.....	Iroquois
Mara, Hubert W.....	Troy
Marquardt, Elizabeth.....	Wentworth
Marske, Albert.....	Andover
Matheny, Alice.....	Turton
Meharg, Max W.....	Verdon



---

Mockler, Nettie M.....	Brookings
Moore, Edith K.....	Volga
Nelson, Gertrude M.....	Brookings
Nelson, Harry A.....	Clark
North, Sterling E.....	Hitchcock
Odland, Henry.....	Hurley
Odland, Ole M.....	Hurley
Orth, Dora B.....	Elkton
Orth, Ruby.....	Elkton
Parsons, Allyn.....	Hurley
Price, Samuel G.....	Rapid City
Quinn, Roy H.....	Arlington
Reinecke, Fred A.....	Athol
Salmon, Eldo.....	Farmer
Scholtes, Nicholas.....	Bancroft
Sharp, Edwin C.....	Bristol
Simmons, E. Earl.....	Brookings
Sipes, Vernon G.....	Tripp
Stacy, Neil A.....	Granite, Oklahoma
Stoddard, George E.....	Faulkton
Stoner, Edgar C.....	Oregon, Ill.
Swenehart, John H. Jr.....	Vandervoort
Thompson, Nellie V.....	Doland
Throop, Ross.....	Brookings
Trumm, Josh.....	Hayti
Walters, Leonard D.....	Bruce
Wileox, Vincent D.....	Aurora
Wilkinson, Earl P.....	Pierre
Williams, Harry G.....	Brookings
Yeandle, Arthur C.....	Highmore

#### PREPARATORY STUDENTS

Acker, John O.....	Rochester, Minn.
Andersen, Carl A.....	Hetland
Anderson, C. Albert.....	Erwin
Anderson, Elmer.....	Veblen
Anderson, Esther M.....	Veblen
Anderson, Ida L.....	Adrian, Minn.
Bartlett, Claire L.....	Wessington Springs
Beatty, Clarence E.....	Blooming Prairie, Minn.
Biggar, James B.....	Brookings
Bixler, Edna.....	Hitchcock
Boersma, Josie.....	Clear Lake
Brakke, Louie.....	Lyons
Brooks, Raymond S.....	Mansfield
Carroll, Harry B.....	Wheeler
Chester, Albert.....	Windom, Minn.

---

Cook, Cora.....	Arlington
Cottingham, Jay T.....	Mount Vernon
Crosier, Frank B.....	Brookings
Culhane, Roger J.....	Elkton
Digre, Marie.....	Hendricks, Minn.
Durland, Ben E.....	Brookings
Dworak, Clara E.....	Wentworth
Dye, Edwin C.....	Richards
Dye, Leonard H.....	Richards
Egge, Gustav.....	Garretson
Eidsmoe, Ella.....	Beresford
Eidsmoe, Spencer G.....	Beresford
Elliott, Warren J.....	Brookings
Erdmann, Henry E.....	Armour
Espland, Clara L.....	Wentworth
Fitzgerald, Raphael V.....	Howard
Flittie, Theodore I.....	Madelia, Minn.
Forbes, Harry A. L.....	Letcher
Fornell, Anna C.....	Strandberg
Gilbert, Glen J.....	Artesian
Goll, Charles.....	Lane
Gorsett, Alfred G.....	Volin
Hansen, Anton.....	Omaha, Neb.
Hanson, Lillie B.....	Viborg
Haven, Herman.....	Mellette
Heald, Harry M.....	Brookings
Heald, Homer S.....	Brookings
Hillan, Aphel O.....	Wentworth
Hoffmann, Fred R.....	Brookings
Hoxeng, Michael.....	Volin
Irish, Mildred.....	Doland
Johnson, Alvira C.....	Brookings
Johnson, Elmer R.....	Brookings
Johnson, Emma V.....	Brookings
Johnson, Joseph O.....	Hendricks, Minn.
Johnson, Otto.....	Lake Benton, Minn.
Johnson, William O.....	Brookings
Kaufmann, Roy H.....	Tracy, Minn.
King, Carrie A.....	Colman
Knutson, Theodore.....	Brookings
Lakings, Samuel J.....	Hurley
Langer, John R.....	Olivet
Lindahl, Fred W.....	Strandburg
Loban, Carrie.....	Brookings
Loban, Jennie I.....	Brookings
Loban, Oral G.....	Brookings
Ludlam, Eleanor C.....	Brookings

---

McMillan, Orville G.....	Alpena
Mair, Charles B.....	Northville
Marshall, Juniem.....	Hitchcock
Martinson, Gina E.....	Brookings
Mathison, Albert.....	Astoria
Mernaugh, Sylvester.....	Letcher
Millett, Fred A.....	Hudson
Morrison, Edna A.....	South Shore
Myhres, Selmer L.....	Arlington
Nolan, Leo M.....	Brookings
Nord, Oscar P.....	
Oddy, Edward.....	Lane
Olson, Anna A.....	Brookings
Olsen, Roy.....	Brookings
Overgaard, Ollie V.....	Centerville
Overseth, James.....	Canton
Patterson, Ivy G.....	Wentworth
Patterson, John V.....	Wentworth
Peirce, Earl F.....	Flandreau
Peterson, Otto.....	Brookings
Peterson, Peter E.....	Arlington
Place, L. Audrey.....	Brookings
Place, L. Edna.....	Brookings
Poole, Neva.....	Brookings
Price, George A.....	Pierre
Rawson, G. Earl.....	Canistota
Reeves, Marjorie L.....	Brookings
Refvem, Martin.....	Lane
Rehnke, William.....	Crandon
Rilling, Harry E.....	Brookings
Rusch, Charles W.....	Osceola
Sample, Joseph C.....	Frankfort
Schmidt, Geo. L.....	Platte
Schmidt, William.....	Raymond
Shea, Charles D.....	Brookings
Shea, M. Henry.....	Brookings
Shepard, Albert D.....	Brookings
Smith, Emma.....	Hitchcock
Smith, George T.....	Miller
Smith, Lewis.....	Gayville
Smith, Nona J.....	Brookings
Solberg, Bert.....	Volin
Stark, Henry A.....	Canova
Steere, Mabel E.....	Goodwin
Stoner, Roy E.....	Oregon, Ill.
Storm, Bertha.....	Merrill, Wis.
Struif, Joseph F.....	Miller

Sundet, Elvina.....	Volga
Svarvari, Alf.....	Castlewood
Thomas, Moses.....	Fedora
Thompson, William S.....	Doland
Thorn, Hamilton H.....	Faulkton
Treacy, Frank P.....	De Smet
Treacy, James P.....	Mathews
Tyson, Pearl E.....	Brookings
Underland, N. A.....	
Wahl, Walter.....	Columbia
Walstrom, Arthur E.....	Brandon
Walters, Paul S.....	Bruce
Wheaton, Ray C.....	Brookings
Wheaton, Robert E.....	Brookings
Wikholm, Theodore R.....	Canova
Williams, Roy E.....	Fedora
Williams, Walter C.....	Lake Preston
Wiser, C. Harry.....	Manley, Iowa
Wornson, Harry R.....	Hadley, Minn.
Yuill, Julius O.....	Winfred

#### SHORT COURSE IN STEAM ENGINEERING

Albertson, Castor.....	Montrose
Amdahl, John C.....	Egan
Anderson, M. L.....	Aberdeen
Bloom, John M.....	Parker
Borgen, Olai.....	Sioux Falls
Bradbury, Ray.....	Winfred
Caylor, James W.....	Harrison
Cress, Frank G.....	Ramona
Crowhurst, Walter F.....	Salem
Crowhurst, Willis H.....	Salem
Cuff, Robert.....	Marlow
Farmen, Edwin.....	Webster
Fosmark, Casper.....	Marlow
Gregg, Sylvanus A.....	Clarkston, Wash.
Howes, Roy L.....	Pierre
Hoy, Richard W.....	Brookings
Huntimer, Martin L.....	Colton
Husted, Emmel A.....	Roslyn
Jones, Earl F.....	Highmore
Jones, Thomas E.....	Fedora
Korth, Otto.....	Summit
Lind, Nels.....	Centerville
Lindahl, Edward.....	Strandburg
Loen, Albert.....	Howard
Lund, Jens P.....	Gayville



McKinley, DeWitt.....	Britton
McKnight, Wayne.....	Brookings
Matousek, Otto E.....	Eagle
Miller, Elmer E.....	Iroquois
Miller, Henry G. Jr.....	Garden City
Neuman, Edward.....	Webster
Newell, William G.....	Ivanhoe, Minn.
Olson, Arthur H.....	Ipswich
Plumb, Roscoe C.....	George, Iowa
Rensch, Conrad.....	Ramona
Rogness, Martin E.....	Wilmot
Rossbach, Henry.....	Lisbon, N. D.
Sayer, Emmet.....	Britton
Schlaefli, Robert.....	Yankton
Schmitt, Paul.....	Zell
Severson, Albert.....	Havana, N. D.
Silvernail, John.....	Marlow
Sipes, Earl H.....	Tripp
Sly, Edward C.....	Brookings
Sogge, George J.....	Hanson
Svenson, Severt.....	Aberdeen
Thayer, Carl G.....	Brookings
Ulvilden, Olaf.....	Sioux Falls
Vold, Abraham.....	Dunlap
Westlund, Henry.....	Lake Benton, Minn.
Wright, Earney.....	Bryant

#### SHORT COURSE IN DOMESTIC SCIENCE

Bradbury, Phoebe E.....	Winfred
Eke, Emma J.....	De Smet
Fossum, Ida.....	Canton
Fossum, Martha.....	Canton
Johnson, Alice M.....	Lennox
Johnson, Regina.....	Sherman
Knudtson, Hilda.....	Howard
Landers, Harriet E.....	Estelline
Lee, Anna.....	Volin
Nirk, Lulu P.....	Iroquois
Overgaard, Tilda K.....	Centerville
Stormo, Anna C.....	Hazel

#### SHORT COURSE IN DAIRY SCIENCE

Bloom, John M.....	Parker
Bonde, Jesse.....	Renville, Minn.
Ford, T. C.....	Frederick
Gullickson, Ole.....	Kasota, Minn.
Johnson, Ole.....	Summit

Overland, G. J.....	Rushford, Minn
Reckstad, Silas.....	Dell Rapids
Rund, Helmer.....	Hazel
Sausman, Ervin E.....	White

## SPECIAL STUDENTS

Arneson, Bessie.....	Effington
Bacon, Lula.....	Brookings
Beebe, Nettie H.....	Brookings
Burgess, Florence E.....	White
Christenson, Harry.....	Hurley
Clarke, Lide R.....	Turton
Downer, W. S.....	Freeman
Gilbert, Fay.....	Artesian
Ginsbach, Margaret.....	Waverly
Gorseth, Chris.....	Irene
Hyde, Winifred R.....	Brookings
Kvernes, Ragna.....	Howard
Larson, Lewis T.....	Volga
Lewis, Ida E.....	Madison
Liskie, Clara.....	Brookings
Martinson, Nels A.....	Brookings
Olander, Mrs. J. F.....	Brookings
Olander, Lillian A.....	Stratford, Iowa
Peterson, Henry S.....	Volin
Ribstein, Lloyd C.....	Bruce
Ross, Grace B.....	Brookings
Rusch, Julia.....	Osceola
Salmonson, Selma.....	Arlington
Schwarzbach, Paula M.....	Elkton
Sedam, James E.....	St. Lawrence
Sheeler, Edward W.....	Webster
Shinnick, Grace.....	Waverly
Watson, William J.....	Brookings
Wieczorek, William.....	Mount Vernon

## SIX WEEKS AGRICULTURE

Adams, T. E.....	Watertown
Alseike, Sever.....	Estelline
Ayers, A. E.....	Madison
Behrens, William.....	Rapid City
Bennett, T. E.....	Clark
Braa, Gilbert.....	Dell Rapids
Bradbury, Ray C.....	Winfred
Cavner, Clarence.....	Egan
Foss, A. B.....	Parker

---

Gates, W. C.....	Clark
Harmdierks, Fred.....	Woonsocket
Holberg, Peter.....	Lake Benton, Minn.
Irish, E. L.....	Doland
Karlstad, H. M.....	Dempster
Marshall, Virgil.....	Murdo
McHugh, Phil M.....	Aberdeen
Negstad, Albert.....	Arlington
Parrott, R. L.....	Clark
Radcliffe, Alfred.....	Wolsey
Sather, William.....	Toronto
Sorsbe, Charles.....	Wagner
Stoner, L. S.....	Highmore
Wilson, Earl.....	Beresford
Young, Homer C.....	Highmore

#### TWO WEEKS AGRICULTURE

Adams, T. E.....	Watertown
Alseike, Sever.....	Estelline
Bandon, Herbert T.....	Highmore
Brown, Victor.....	Canova
Ching, H.....	Castlewood
Davis, Frank.....	Pine Ridge
Field, E. R.....	Lake Preston
Fleming, F. F.....	White
Fulkerson, S. M.....	Brookings
Hayden, T. T.....	Toronto
Hetland, Clarence A.....	Lake Preston
Hockett, A. C.....	Stickney
Korstad, H. H.....	Brookings
Ladd, E.....	Brookings
Mathiesen, Walter.....	Watertown
Nelson, Charles J.....	Hudson
Sargent, Harry.....	Hurley
Sateren, M. T.....	Sisseton
Schmidt, F. P.....	Salem
Tuck, George E.....	Watertown
Weeks, Martin.....	Vermillion
Young, Homer C.....	Highmore

#### MUSIC STUDENTS

Alton, Lila F.....	Piano, Voice.....	Brookings
Anderson, Edith.....	Voice.....	Ashton
Anderson, Esther M.....	Piano.....	Veblen
Arneson, Bessie.....	Piano.....	Effington
Beals, George D.....	Horn.....	Ipswich

Bisbey, Guy N. ....	Clarinet.....	Brookings
Bradbury, Ray C.....	Clarinet.....	Winfred
Brooks, Raymond S.....	Horn.....	Mansfield
Bryant, Glenn A.....	Voice.....	Andover
Burgess, Agnes.....	Voice.....	White
Burgess, Florence.....	Voice.....	White
Casley, Bertha.....	Piano, Violin.....	Brookings
Catlett, Marguerite H.....	Piano, Voice.....	Brookings
Catlett, Winifred F.....	Piano.....	Brookings
Champlin, Manley J.....	Voice.....	Faultkton
Christie, Clara.....	Piano, Voice.....	Volga
Clark, Lide R.....	Piano.....	Turton
Clough, Eva H.....	Piano.....	Madison
Coakley, Manning F.....	Piano.....	Flandreau
Cole, Jessie.....	Piano.....	Brookings
Coller, Helen A.....	Voice.....	Brookings
Comstock, Lula Z.....	Piano.....	Brookings
Cottingham, Jay T.....	Voice.....	Mount Vernon
Crothers, Harold M.....	Voice.....	Brookings
Dull, Minnie.....	Piano.....	Brookings
Dutcher, R. Adams.....	Voice.....	Brookings
Eidsmoe, Ella.....	Piano, Voice.....	Beresford
Erwin, Ruth E.....	Piano.....	Brookings
Espland, Clara L.....	Piano.....	Wentworth
Evans, Hazel.....	Violin.....	Aurora
Farmen, Edwin S.....	Violin.....	Webster
Fjerestad, Anna C.....	Piano, Voice.....	White
Forbes, Harry A. L.....	Horn.....	Letcher
Fossum, Ida.....	Piano.....	Canton
Fossum, Martha.....	Piano.....	Canton
Fridley, J. Ray.....	Voice.....	Turton
Gilbert, Fay.....	Piano, Voice.....	Artesian
Grace, Oliver.....	Voice.....	Woonsocket
Groff, Mabelle.....	Piano.....	
Haber, Lula M.....	Piano.....	Brookings
Hendrickson, Ada.....	Piano, Violin.....	Effington
Hess, Mary E.....	Piano.....	Estelline
Hoffmann, Fred R.....	Piano.....	Brookings
Hyde, Winifred R.....	Voice.....	Brookings
Irish, Mildred.....	Piano.....	Doland
Johnson, Aaron G.....	Voice.....	Brookings
Johnson, Alice M.....	Piano, Voice.....	Lennox
Johnson, Alvira C.....	Voice.....	Brookings
Johnson, Clara A.....	Piano.....	Brookings
Johnson, Clifford D.....	Piano.....	Broadland
Johnson, Esther B.....	Voice.....	Brookings
Johnson, Joseph O.....	Violin.....	Hendricks, Minn



---

Johnson, Mary A.....	Piano .....	Brookings
Kelly, Thomas B.....	Voice .....	Brookings
Kelly, Vernon.....	Voice .....	Brookings
Kleppin, George P.....	Violin .....	Lane
Koch, Arthur E.....	Piano, Voice.....	Brookings
Kremer, Henrietta L.....	Voice .....	Brookings
Kvernes, Ragna.....	Piano, Voice.....	Howard
Lakings, Samuel J.....	Violin .....	Hurley
Lawrence, Ethel.....	Piano .....	Doland
Lee, Anna.....	Piano .....	Volin
Lee, Myrtle.....	Piano .....	Brookings
Lewis, Ida E.....	Piano .....	Madison
Lind, Nels.....	Violin .....	Centerville
Lloyd, Robert E.....	Voice .....	Brookings
Loban, Jennie I.....	Piano .....	Brookings
Lund, Jens P. N.....	Violin .....	Gayville
McElmurry, Rilla.....	Voice .....	Brookings
Mach, Tena.....	Piano, Violin.....	Lesterville
Mair, Charles B.....	Horn .....	Northville
Matheny, Alice.....	Piano .....	Turton
Matousek, Otto E.....	Voice .....	Eagle
Melum, Edward E.....	Violin.....	Chicago, Ill.
Millett, Fred A.....	Violin .....	Hudson
Nicholson, Lida.....	Piano .....	Brookings
Olander, Lillian A.....	Piano.....	Stratford, Iowa
Orth, Ruby.....	Piano .....	Elkton
Overgaard, Tilda K.....	Piano .....	Centerville
Paul, Walter R.....	Horn .....	Brookings
Paul, Winifred.....	Piano .....	Brookings
Peirce, Ruth.....	Piano .....	Brookings
Quinn, Roy H.....	Horn .....	Arlington
Refvem, Martin.....	.....	Lane
Rehnke, William.....	Piano .....	Crandon
Rusch, Charles W.....	Voice .....	Osceola
Rusch, Julia.....	Piano .....	Osceola
Salmonson, Selma.....	Piano .....	Arlington
Sample, Joseph C.....	Piano .....	Frankfort
Sanborn, Harvey W.....	Clarinet.....	Clear Lake
Schauer, Amy.....	Piano .....	Garretson
Scotchbrook, Frances.....	Piano .....	Wessington
Sexauer, Elmer.....	Voice .....	Brookings
Sexauer, Laura E.....	Piano .....	Brookings
Sherwin, Muriel.....	Piano, Voice.....	Brookings
Sipes, Earl H.....	Violin .....	Tripp
Sloan, Elizabeth.....	Piano, Voice.....	Brookings
Smith, Lewis.....	Violin .....	Gayville
Temte, Verna.....	Piano .....	Volga

---

Thompson, May P.....	Voice .....	Brookings
Thompson, Nellie V.....	Violin .....	Doland
Throop, Lotta M.....	Piano .....	Brookings
Treacy, F. P.....	Piano .....	DeSmet
Welch, Cecile I.....	Piano .....	Brookings
West, Florence E.....	Piano .....	Brookings
West, Frances E.....	Piano, Voice.....	Brookings
Westcott, G. R.....	Voice .....	Brookings
Westcott, Ruth .....	Piano .....	Brookings
Wheaton, Ray C.....	Voice .....	Brookings
Whitehead, Lindsey W.....	Voice .....	Brookings
Wilcox, Vincent D.....	Horn .....	Aurora
Williams, Ruby.....	Voice .....	Brookings
Wiser, C. Harry.....	Voice.....	Manley, Ia.

## SUMMARY

---

Graduate Students.....	4
Seniors .....	24
Juniors.....	32
Sophomores .....	50
Freshmen .....	78
Sub-Freshmen .....	73
Preparatory Students.....	129
Short Course in Steam Engineering.....	51
Short Course in Domestic Science.....	12
Short Course in Dairy Science.....	9
Special Students.....	29
Six Weeks Course in Agriculture.....	24
Two Weeks Course in Agriculture.....	22
Music Students.....	113
<hr/>	
Total .....	650
Names repeated.....	98
<hr/>	
Net Total.....	552

# INDEX.

	Page		Page
Abbreviations .....	38	Department .....	41
Adams Act.....	17	Design of Power Stations.....	82
Admission, Conditions of.....	36	Dietetics .....	70
Agriculture.....	44, 60, 136	Domestic Art.....	70, 131
Alternating Currents.....	82	Dormitories .....	20
Alumni.....	145	Drug Assaying .....	107
Alumni Association.....	145	Dynamo Design .....	82
Analytic Mechanics.....	93	Dynamo Electric Machinery.....	81
Anatomical Methods.....	101		
Architectural Drawing and De- sign.....	74	Economics .....	91
Art.....	119, 130	Electrical Engineering.....	50, 54, 81
Art History.....	119	Electric Light and Power Distri- bution .....	82
Astronomy.....	92, 93	Employees.....	12
Athletics.....	32, 34, 140	Engineering Design.....	78
Athletic Grounds.....	22	English.....	86, 126
Attendance.....	39	Entertainments .....	32
		Entomology .....	101
Bacteriology.....	69	Entrance Conditions.....	36
Bookkeeping .....	134	Equipment .....	18
Botany.....	96	Establishment and Purpose.....	14
Breeds of Live Stock.....	61	Ethics .....	92
Buildings .....	19	Examination for Entrance.....	36
Butter Makers Course.....	64	Excuses.....	39
		Expenses, Students'.....	27, 117, 134
Calendar .....	3	Experiment Station.....	11, 18, 59
Calculus .....	93		
Campus.....	18	Faculty.....	4, 25
Carpentry .....	130	Farm .....	20
Chapel Exercises.....	31	Farm Crops.....	62
Chaucer.....	86	Farm Mechanics.....	62
Cheese Making.....	65	Farm Management.....	62
Chemistry.....	101	Floriculture .....	67
Christian Associations.....	33	Food.....	70
Civil Engineering.....	52, 54, 83	Forestry.....	68
Clothing and Shelter.....	70	Forging .....	130
Collegian Staff and Organization .....	34, 142	Free Hand Drawing.....	130
Commercial Science.....	131	French .....	89
Committees, Faculty.....	9	Freshmen .....	157
Conditioned Students.....	39		
Conduct, Student.....	26	Gas and Oil Engines.....	76
Contracts and Specifications.....	85	General Science Course.....	54
Cooking.....	131	Genetics .....	61
Courses Defined.....	38	German.....	89
		Geodesy .....	84
Dam and Reservoir Design.....	85	Geology.....	98
Dairying.....	62, 64	Grades.....	38
Degrees .....	41	Gymnasium.....	20



	Page		Page
Handicraft .....	120	Painting, Oil.....	120
Hatch Act.....	16, 59	Pharmacognosy .....	98
Heat .....	96	Pharmacy.....	58, 104
Heating.....	24, 78	Pharmacy Graduates.....	152
History.....	89, 128	Philosophy.....	91
History of Education.....	92	Physical Culture.....	31, 122
Home Economics.....	47, 70	Physics.....	93, 129
Home Gardening.....	68	Physiography.....	130
Horseshoeing.....	69	Physiology.....	100, 130
Horticulture.....	65	Piano Music.....	110
Household Economy.....	70	Policy of the College.....	17
Household Sanitation.....	70	Pomology .....	67
Hydraulics.....	84, 85	Political Science.....	89
Hygiene .....	70	Postal Facilities .....	24
		Post Graduates.....	154
Income, Sources of.....	16	Power Transmission.....	78
Invalid Cookery.....	70	Preparatory Department.....	125, 126
Irrigation.....	84	Preparatory Students.....	160
		Prizes .....	34
Juniors .....	155	Psychology.....	92
		Publications, Student.....	34
Kinematics.....	76	Public Speaking.....	120
		Polyphase Currents.....	82
Laboratories.....	20		
Labor, Student.....	28	Railroad Engineering.....	85
Landscape Gardening.....	68	Regents.....	10, 24
Languages, Modern.....	88	Registration, Method of.....	38
Latin.....	87, 127	Required Exercises.....	26
Law .....	135	Rhetoric.....	86, 127
Lecture and Class Rooms.....	23	Roads and Pavements.....	84
Library.....	22, 127		
Light .....	96	Sanitary Conditions.....	23
Lighting.....	24	Schedules of Courses.....	44, 58
Literature.....	86	Schemes of Study.....	43
Literary Societies.....	33, 140	Scholarships .....	29
Living Arrangements of Students.....	26, 28	Seniors .....	154
Location of College.....	15	Sewerage.....	84
		Sewing.....	71, 131
Machine Shop.....	74	Short Courses.....	3, 43, 63, 65, 68, 80
Market Gardening.....	67	Shorthand .....	134
Masonry and Foundations.....	84	Sociology .....	90
Mechanics of Materials.....	76	Soils.....	61, 62
Materia Medica.....	106	Sophomores.....	156
Mathematics.....	93, 129	Special Courses.....	43, 63, 65, 68
Mechanical Drawing.....	74	Special Students.....	37, 165
Mechanical Engineering.....	49, 72, 53, 130	Steam Boilers.....	76
Mechanism, Elements of.....	76	Steam Engineering.....	80
Methods of Teaching.....	92	Steam Engines.....	76
Military.....	30, 122, 141	Stock Breeding.....	61
Morrill Act.....	16	Stock Feeding.....	62
Museums.....	22	Stock Judging.....	61
Music.....	107	Student Affairs.....	26
		Study Room.....	23
		Surveying .....	83
Nelson Fund.....	16		
Nursery Handicraft.....	68	Telephone Engineering.....	81
Home Nursing and Invalid Cook- ery .....	70	Terms and Vacations.....	3, 28
		Time to Enter.....	27
Oratorical Association.....	34, 142	Testing of Power Plants.....	82
Organizations, Student.....	33, 142	Thermodynamics.....	76
		Tuition.....	27

	Page
Tutoring.....	26, 40
Tutors .....	12
Typewriting .....	134
Veterinary Anatomy.....	69
Veterinary Medicine.....	68
Violin.....	113, 115

	Page
Voice .....	112
Water Supply.....	84
Wood Turning.....	130
Zoology.....	100, 130









7dH  
-08

VOLUME 1

NUMBER 1

---

SOUTH DAKOTA STATE COLLEGE  
OF AGRICULTURE AND  
MECHANIC ARTS

---

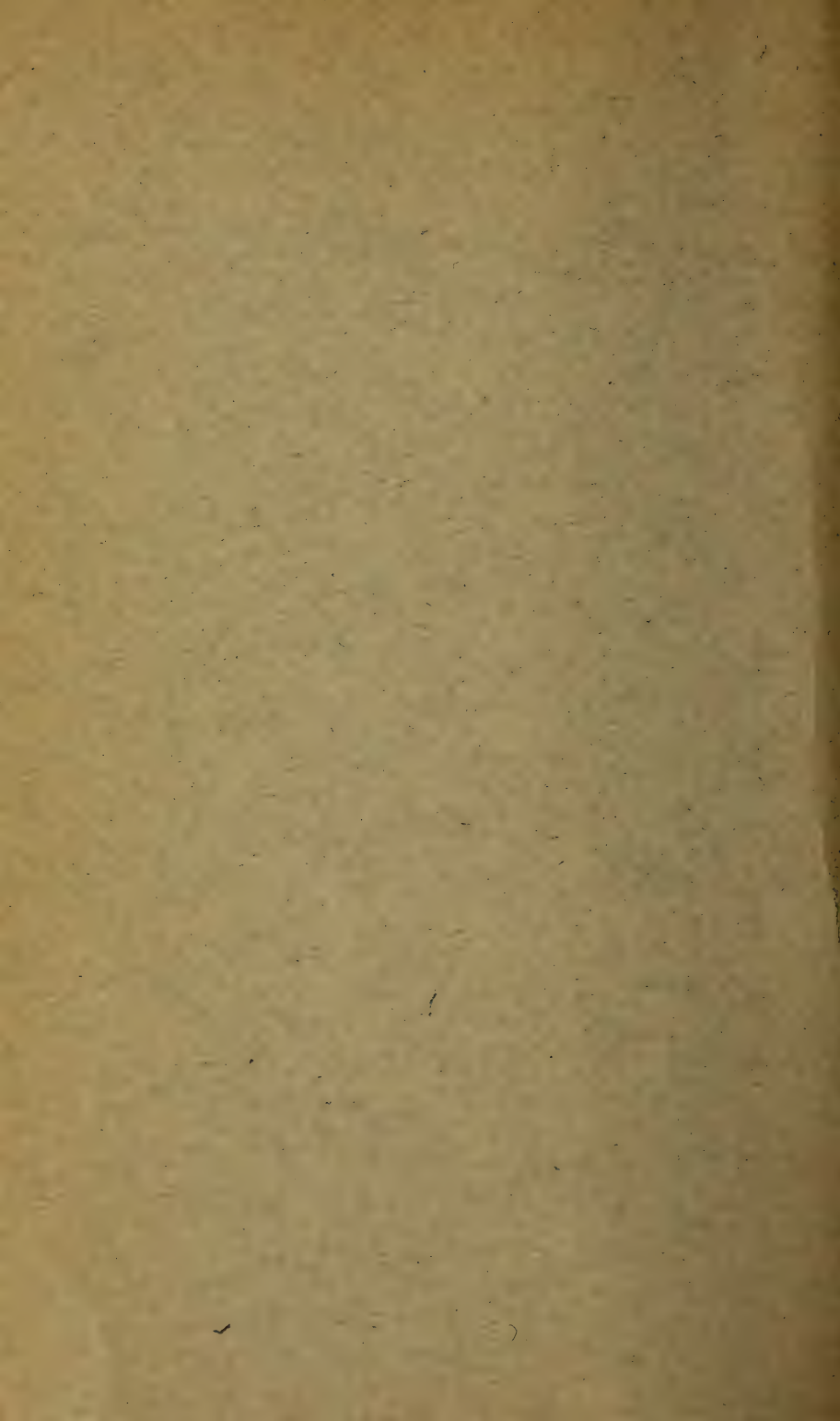
BULLETIN

---

ANNUAL CATALOG  
1907-1908

---

PUBLISHED QUARTERLY BY SOUTH DAKOTA STATE COLLEGE  
BROOKINGS, S. D., JULY 1908



VOLUME 1

NUMBER 1

---

SOUTH DAKOTA STATE COLLEGE  
OF AGRICULTURE & MECHANIC ARTS

---

BULLETIN

---

ANNUAL CATALOG

1907-1908

PUBLISHED QUARTERLY BY  
SOUTH DAKOTA STATE COLLEGE  
BROOKINGS, S. D.  
JULY, 1908





## CALENDAR FOR 1908-9

---

1908.

### FIRST SEMESTER.

- September 14-15—Entrance examinations and registration.  
September 16—Work of first semester begins.  
September 25—Faculty reception to students.  
November 1—Last day for announcing subjects of theses.  
November 3—School of Agriculture opens.  
November 26-27—Thanksgiving recess.  
December 18—Christmas vacation begins at noon.

1909.

- January 4—Christmas vacation ends at 8:00 a. m.  
January 4—Second term of School of Agriculture opens.  
January 4—Short courses begin.  
January 25-29—Examination week.  
January 29—First semester ends.

### SECOND SEMESTER.

- February 1—Second semester begins.  
April 5 to 9—Spring vacation.  
May 24—Senior vacation begins.  
May 31 to June 4—Examination week.  
June 6—Baccalaureate sermon.  
June 9—Commencement exercises at 10:30 a. m.
- 

## CALENDAR OF SHORT COURSES

- September 16 to June 9—One year's course in dairy science.  
January 4 to January 15—Short course in poultry husbandry.  
January 4 to January 15—Short course in dairy science.  
January 4 to February 12—Short course in agriculture.  
January 4 to April 2—Short course in horticulture.  
January 4 to June 9—Short course in steam engineering.

## REGENTS OF EDUCATION

---

HON. A. W. BURTT.....	Huron
HON. F. A. SPAFFORD.....	Flandreau
HON. ALBERT M. ANDERSON.....	Sturgis
HON. E. C. ERICSON.....	Elk Point
HON. A. J. NORBY.....	Sisseton

---

## OFFICERS OF THE BOARD

---

HON. E. C. ERICSON.....	President
HON. F. A. SPAFFORD.....	Vice President
HON. I. D. ALDRICH.....	Secretary
HON. C. H. CASSILL (State Treasurer).....	Treasurer

---

## REGENTS' COMMITTEE FOR THE COLLEGE

---

HON. F. A. SPAFFORD

HON. A. J. NORBY

---

MR. R. A. LARSON.

Secretary and Accountant, Brookings, S. D.

## FACULTY

---

ROBERT LINCOLN SLAGLE, A. M., Ph. D., President.

A. B., Lafayette College, 1887; A. M., Lafayette College, 1890; Ph. D., Johns Hopkins University, 1894; Assistant to Professor W. O. Atwater in food investigation, Middletown, Connecticut, and New York City, 1894-1895; Professor of Chemistry, South Dakota Agricultural College, 1895-1897; President and Professor of Chemistry, South Dakota School of Mines, 1897-1905; President South Dakota Agricultural College since January 1, 1906.

HUBERT BERTON MATHEWS, M. S., Professor of Physics and Electrical Engineering.

B. S., South Dakota Agricultural College, 1892; M. S., South Dakota Agricultural College, 1899; Superintendent of City Schools, Clark, S. D., 1892-1893; Assistant in Chemistry and Physics, South Dakota Agricultural College, 1893-1896; Professor of Physics, 1896-1899; Professor of Physics and Electrical Engineering since 1899.

JAMES HENRY SHEPARD, B. S., Professor of Chemistry.

B. S., University of Michigan, 1875; Post-graduate Student in University of Michigan, 1881-1882; Instructor in Natural Sciences, Ypsilanti, Michigan, High School, 1882-1888; Professor of Chemistry, South Dakota Agricultural College since 1888.

HALVOR CHRISTIAN SOLBERG, M. E., Professor of Mechanical and Steam Engineering.

B. S., South Dakota Agricultural College, 1891; B. M. E., Purdue University, 1895; M. E., Purdue University, 1896; Professor of Practical Mechanics, South Dakota Agricultural College, 1891-1896; Professor of Mechanical and Steam Engineering since 1896.

BOWER THOMAS WHITEHEAD, M. S., Ph. C., Professor of Pharmacy.

Ph. G., South Dakota Agricultural College, 1895; Ph. C., Northwestern University, 1896; B. S., South Dakota Agricultural College, 1897; M. S., South Dakota Agricultural College, 1901; Professor of Pharmacy in South Dakota Agricultural College since 1896.

NIELS EBBESEN HANSEN, M. S., Professor of Horticulture and Forestry.

B. S., Iowa Agricultural College, 1887; M. S., Iowa Agricultural College, 1894; Commercial Iowa Nurseries, Atlantic and Des Moines, 1888-1891; Assistant Professor of Horticulture, Iowa Agricultural College, 1891-1895; Agricultural Explorer for U. S. Department of Agriculture to Europe and Asia, 1897-1898, 1906-1907; Professor of Horticulture in South Dakota Agricultural College since 1895.



GEORGE LINCOLN BROWN, Ph. D., Professor of Mathematics and Astronomy.

B. S., University of Missouri, 1892; Teaching Fellow in Mathematics, 1892-1893; M. S., 1893; Fellow in Mathematics, University of Chicago, 1894-1896; Ph. D., University of Chicago, 1900; Professor of Mathematics, South Dakota Agricultural College, since 1896.

EDWARD LOCKHART MOORE, B. S., D. V. S., Professor of Zoology and Veterinary Medicine.

B. S., Cornell University, 1896; D. V. S., Columbian University, 1898; Professor of Zoology and Veterinary Medicine, South Dakota Agricultural College, since 1898.

ARTHUR BOONE CROSIER, Professor of Commercial Science.

Student in Brandenburg Academy, Kentucky, and New Albany Business College, Indiana; Principal of Shorthand Department, Bryant and Stratton Business College, Chicago, 1896-1897; Professor of Commercial Science, South Dakota Agricultural College, since 1898; admitted to practice law in South Dakota, October, 1904.

ADA BERTHA CALDWELL, Professor of Industrial Art.

Student Art Institute of Chicago, 1893-1897; Instructor in Art, Yankton College, 1897-1899; Professor of Industrial Art, South Dakota Agricultural College, 1899-1903; Student Teachers' College, N. Y., and Chase School of Art, N. Y., 1903-1904; Professor Industrial Art, South Dakota Agricultural College, since 1904.

ROBERT BLACKWOOD FORSEE, Pe. P., Principal of Preparatory Department.

Principal of Pedagogy, Western College, Missouri, 1888; Principal Elgin, Missouri, Schools, 1889-1891; Steffenville, 1892-1893; Estelline, South Dakota, 1895-1896; County Superintendent, Hamlin County, South Dakota Schools, 1896-1900; Principal Preparatory Department, South Dakota Agricultural College, since 1901.

ALBERT SPENCER HARDING, A. M., Professor of History and Political Science.

B. S., South Dakota Agricultural College, 1892; Fellow in American History, University of Nebraska, 1896-1897; A. M., University of Nebraska, 1897; Assistant in History and Civics, South Dakota Agricultural College, 1897-1900; Professor of History and Political Science, South Dakota Agricultural College, since 1901.

JAMES WILBUR WILSON, M. S. A., Director of the Experiment Station and Professor of Agriculture and Animal Husbandry.

B. S. A., Iowa Agricultural College, 1896; M. S. A., Iowa Agricultural College, 1898; Assistant in Agriculture at the Iowa Agricultural College, 1896-1897; Private Secretary to Secretary of Agriculture from

November, 1897, to March, 1900; Director of the Experiment Station and Professor of Agriculture and Animal Husbandry, South Dakota Agricultural College since 1902.

RUFUS BUEL McCLENON, A. M., Professor of Pedagogy and Latin.

A. B., Williams College, 1878; A. M., Williams College, 1881; Teacher in Granville Military Academy, N. Y., 1880-1882; Teacher in Lake Geneva Seminary, Wisconsin, 1882-1885; Principal Oconto, Wisconsin, High School, 1885-1887; Instructor in Beloit College, 1887-1889; Principal Sioux Falls High School, South Dakota, 1889-1893; Superintendent of Madison Public Schools 1893-1902; Principal Normal Department, Huron College, 1902-1904; Professor of Pedagogy and Latin, South Dakota Agricultural College, since 1902.

GEORGE DICKINSON GUYER, Professor of Military Science and Tactics.

Graduate West Point Military Academy, 1891; Graduate U. S. Infantry and Cavalry School, Signal School and Staff College (Post Graduate course), 1897; Battalion Adjutant 1899-1901; Detached Service-Ordinance Department, U. S. Army, 1897-1898; Organized Militia South Dakota 1905-1907; Instructor at Recruit Rendezvous, Fort Slocum, 1902-1904; Engineer, Officer, Col. Hood Staff Northern Division, P. I., 1900-1901; Judge Provost Court 1900; War Service Spanish War, 5th Army Corps, Cuba, July 24th to August 15th, 1898; Philippine Insurrection, June 26th, 1899-July 8th, 1902; Professor Military Science and Tactics since September, 1904.

WILLIAM HOWARD POWERS, A. B., M. A., Librarian and Associate Professor of English.

A. B., Miami University, 1891; A. M., Harvard University, 1899; Student in the Graduate School, Harvard, 1899-1901; Instructor in Mathematics, Ohio Normal University, 1888-1889; Master of the High School, Marwich, Massachusetts, 1892-1895; Head of the Department of English, High School, Pawtucket, Rhode Island, 1895-1898; Professor of English, Huron College, 1901-1905; Librarian and Associate Professor of English, South Dakota Agricultural College, since 1905.

WILLIAM SOLOMON HAYES, A. B., Professor of French and German.

A. B., Harvard University, 1899; Student in France, Germany, Italy and Spain, four years; Professor of the Romance Languages, University of Vermont, 1900-1905; Professor of French and German, South Dakota Agricultural College, since 1906.

EDITH MARY WILCOX, B. L., Ed. B., Professor of Home Economics.

B. L., University of California, Berkeley, California, 1905; Ed. B., University of Chicago, 1906; Professor of Home Economics in South Dakota Agricultural College since September, 1906.

HOMER MUNRO DERR, A. B., A. M., Ph. D., Professor of Civil Engineering.

A. B., Leland Stanford University, 1898; A. M., Columbia University, 1901; Ph. D., University of Pennsylvania, 1903; elected Scholar in Physics, Clark University, 1899, and Scholar in Geology, Columbia University, same year; Assistant in Physics, Columbia University, 1899-1901; Instructor in Mining Engineering and Geology, University of Wyoming, 1901-1902; Tyndall Fellow, University of Pennsylvania, 1902-1903; Superintendent of Mines and in charge of dam construction for hydraulic mining, Santa Margarita Gold Mining Company, Department of Antioquia, Columbia, South America, 1903-1904; Professor of Mathematics and Civil Engineering, Clarkson School of Technology, 1904-1906; Professor of Civil Engineering at South Dakota State College since January, 1907.

ARTHUR AMBER BRIGHAM, Ph. D., Principal School of Agriculture.

B. S., Massachusetts Agricultural College, 1878; Professor of Agriculture in the Imperial College of Agriculture, Sapporo, Japan, 1889-1893; Ph. D., Goettingen University, Germany, 1896; Professor Agriculture, College of Agriculture and Mechanic Arts, Rhode Island, 1896-1901; Experimenting in Incubation at Ithaca, New York, 1901-1902; Director Columbia School of Poultry Culture, 1903-1904; elected Principal School of Agriculture in South Dakota Agricultural College July 1st, 1907.

EDGAR WILLIAM OLIVE, A. M., Ph. D., Professor of Botany.

B. S., Wabash College, 1893; S. M., Wabash College, 1895; A. M., Harvard University, 1897; Ph. D., Harvard University, 1902; Assistant in Botany, Harvard University and Radcliffe College, 1897-1898; Instructor in Botany, Harvard and Radcliffe, 1898-1903; Research Student of the Carnegie Institute at University of Bonn, 1904-1905, and at University of Wisconsin 1905-1907; Lecturer in Botany, University of Wisconsin, 1905-1907; Professor of Botany, South Dakota Agricultural College, 1907.

HENRY HANSON LOUDENBACK, Professor of Music.

Graduate, Conservatory of Music, Campbell University, Holton, Kansas, 1902; Assistant in Piano and Theory of Music, Campbell University, 1901-1902; Director of School of Music, Atchison County High School, Effingham, Kansas, 1902-1906; Student in Virgil Clavier Piano School, New York City, 1903; Repertory with Allen Spencer in American Conservatory, Chicago, 1906; Professor of Music, South Dakota Agricultural College, since 1906.

C. LARSEN, M. S. A., Professor of Dairy Husbandry.

B. S. A., Iowa State College, 1902; M. S. A., Iowa State College 1904. Study of European dairying, 1900; Dairy Instructor in Massachusetts Agricultural College, 1901; Assistant and Associate Professor of

Dairying in Iowa State College, 1902-1906; Professor of Dairy Husbandry in Utah Agricultural College, 1907; Professor of Dairy Husbandry, South Dakota State College, since 1907.

MADISON CLAIR BATES, A. M., Professor of English.

A. B., Williams College, 1904; A. M., Williams College, 1905; A. M., Harvard University, 1906; Instructor in English, University of Illinois, 1906-1907; Professor of English, South Dakota State College, since 1907

JESSIE MAY HOOVER, B. S., Preceptress of the School of Agriculture.

Graduate of Kansas State Normal College, 1898; Student of Domestic Science at Lewis Institute of Technology, 1904; B. S. in Domestic Science, Kansas State Agricultural College, 1905; Student of Domestic Science and Chemistry, University of Chicago, 1907; Teacher in city schools of Topeka, Kansas, for six years; Supervisor of Manual Training for Girls and Teacher of Household Science in the Plummer Manual Training School, Idaho Springs, Colorado, 1905-06; Preceptress of School of Agriculture, South Dakota State College, since 1907.

CLIFFORD WILLIS, S. B., M. S., Professor of Agronomy.

Student at State Normal School, Illinois, Summer Sessions, 1894 and 1895; Student at Illinois Wesleyan University, 1898-1899; Sc. B., University of Illinois, 1900; M. S. in Agronomy, University of Illinois, 1906; Principal of Public Schools, Hudson, Illinois, 1893-1895; Principal of High School, Stanford, Illinois, 1895-1898; Head Teacher of Mathematics in High School, Champaign, Illinois, 1900-1901; Principal of High School, Urbana, Illinois, 1901-1903; Assistant in Soil Physics, College of Agriculture and Agricultural Experiment Station, University of Illinois, 1903-1905; Instructor in Soil Physics, College of Agriculture, and First Assistant in Soil Physics, Agricultural Experiment Station, University of Illinois, 1905-1908; Professor of Agronomy, South Dakota State College, since February 15, 1908.

HOWARD H. HOY, B. S., M. S., Instructor in Physics and Electrical Engineering.

B. S., South Dakota Agricultural College, 1896; M. S., South Dakota Agricultural College, 1903; Instructor in Mechanical and Electrical Engineering, South Dakota Agricultural College, 1899-1904; Instructor in Physics and Electrical Engineering in the South Dakota Agricultural College since 1904.

JOHN HARLAND NELSON, B. S., Assistant in Mathematics.

B. S., South Dakota Agricultural College, 1905; Registrar and Assistant in Commercial Science, 1902-1903; Registrar and Assistant in Mathematics, 1903-1905; Assistant in Mathematics since 1905.



**MAUD GODARD, Assistant in Art Department.**

Student Art Institute, Chicago, 1903; Instructor at South Dakota Agricultural College since 1903.

**SHIRLEY PUTNAM MILLER, M. A., Assistant in Zoology and Bacteriology.**

B. S., South Dakota Agricultural College, 1903; M. A., University of Minnesota, 1905; Member of Minnesota Seaside Station, 1902-1905; Assistant in Zoology and Bacteriology, South Dakota Agricultural College, since 1905.

**WILLIAM J. JUNEAU, A. B., Director of Athletics.**

A. B., University of Wisconsin, 1904; Director of Athletics, Colorado College, Colorado Springs, 1904-1905; Director of Athletics, South Dakota Agricultural College, since 1905.

**FRANCIS J. HAYNES, Instructor in Vocal Music and Band Leader.**

Graduated in vocal music from Hillsdale College, Michigan; Pupil of Mariscalchi; taught at various times in Western Reserve Seminary, West Farrington, Ohio; Bartell College of Music, Warren, Ohio; Streater Conservatory of Music, Streater, Illinois, and Michigan State Industrial School, Lansing, Michigan; Instructor in Vocal Music and Band Leader in South Dakota Agricultural College since 1906.

**CARL CHRISTENSEN, Instructor in Stringed Instruments.**

Studied with Professor Christian Madsen, of Copenhagen, Denmark; since coming to America has studied under several fine instructors, the most notable being Mr. C. F. Toenniges, of Davenport, Iowa, he being a pupil of Theodore Spiering, of Chicago; taught a year and a half in Brookings, South Dakota, before beginning his work at the South Dakota Agricultural College in 1906.

**ESTELLA MUSGRAVE, Instructor in Elocution and Physical Culture.**

Two years a student in Lombard College, Galesburg, Illinois; graduated from Mrs. Noble's School of Expression and English Literature, Detroit, Michigan, 1905; engaged in Chautauqua and Recital Work in Summer of 1906; Instructor in Elocution, South Dakota Agricultural College, since 1906.

**BLANCHE EDINBOROUGH, Assistant in Piano Music.**

Studied Music at Midland College at Atchison, Kansas, later entered Campbell College at Holton, Kansas, graduating in 1902; studied at the American Conservatory of Music in Chicago, with Victor Garwood; nine years experience in private teaching of music; Assistant in Piano Music at South Dakota Agricultural College since January, 1907.

**ROBERT MATHIESON, B. S. A., Instructor in Entomology.**

B. S. A., Cornell University, 1906; M. S. in Agriculture, Cornell

University, 1907; Instructor in Entomology in South Dakota Agricultural College since 1907.

GERTRUDE S. YOUNG, A. B., Instructor in Preparatory Department.

A. B., University of Wisconsin, 1906; Instructor in Preparatory Department in South Dakota Agricultural College, July, 1907.

NOLA KATHERINE FROMME, B. S., Assistant in Home Economics.

B. S. in Domestic Science, Ohio State University, 1905; Assistant in Home Economics, South Dakota Agricultural College, July, 1907.

CARRIE LOUISE PHILLIPS, B. S., M. S., Assistant Librarian.

B. S., South Dakota Agricultural College, 1901; M. S., South Dakota Agricultural College, 1905; Assistant Librarian since September, 1906.

ARTHUR EDWIN KOCH, B. S., Assistant in Chemistry.

Ph. G., South Dakota Agricultural College, 1904; B. S., South Dakota Agricultural College, 1906; Assistant in Chemistry, South Dakota Agricultural College, since 1906.

FRED A. COLLIER, B. S., Assistant in Chemistry.

B. S., South Dakota Agricultural College, 1906; Assistant in Chemistry in South Dakota Agricultural College since April, 1906.

CHARLES HERMAN VIOL, B. S., Instructor in Chemistry.

B. S., Purdue University, 1907; Chemist, Union Starch and Refining Company, Edinburg, Indiana, 1907; Instructor in Chemistry, South Dakota State College, since September, 1907.

ROBERTSON COOK, M. E., Instructor in Mechanical and Steam Engineering.

M. E., University of Minnesota, 1902; Assistant Instructor in Mechanical Engineering, University of Minnesota, 1903; Engineer with Oliver Iron Mining Company, Duluth, Minnesota, 1904; Mechanical Engineer for the Western Lime and Cement Company, Milwaukee, Wisconsin, 1904-1908; Instructor in Mechanical and Steam Engineering, South Dakota State College, since January, 1908.

---

## FACULTY COMMITTEES

---

These will be announced at the opening of the first semester.

## STATION COUNCIL AND MEETING

---

The Station Council is composed of the Regents' Committee for the College, the President of the College and heads of staff divisions.

---

## AGRICULTURAL EXPERIMENT STATION STAFF

---

James W. Wilson, Director.....	Animal Husbandry
N. E. Hansen, Vice-Director.....	Horticulturist
James H. Shepard.....	Chemist
E. L. Moore.....	Veterinarian
Edgar W. Olive.....	Botanist
C. Willis.....	Agronomist
C. Larsen.....	Dairy Husbandry
Wm. West.....	Foreman Station Farm
A. E. Koch.....	Assistant in Chemistry
Sylvester Baltz.....	Superintendent Highmore Sub-Station
F. C. Stoltenberg.....	Florist
R. A. Larson.....	Secretary and Accountant
Ben B. Lawshe.....	Station Stenographer

## OTHER REGULAR EMPLOYEES

---

Roy Orvis Wilson.....	Secretary to the President
Fred Betkey.....	Engineer
Abraham Vold.....	Fireman
George E. Purdy.....	Janitor and Carpenter
Clarence A. Davis.....	Assistant Janitor
H. C. Hanson.....	Farm Teamster
P. P. Hoff.....	Herdsman
Lawrence McGarry.....	Farm Assistant
Peter Green.....	Night Watchman
Emil Olson.....	Campus Teamster

---

## TUTORS

---

Tutors for the several departments will be appointed and published at the opening of the new college year.

All students absent from regular college exercises will be expected to arrange with a tutor for making up omitted work.



## GENERAL INFORMATION

### A—Historical

1. **ESTABLISHMENT.** An Act of Congress approved July 2, 1862, gave to each state 30,000 acres of public lands for each representative in Congress towards "the endowment, support and maintenance of at least one college, where the leading object shall be, without excluding other scientific and classical studies, and including military tactics, to teach such branches of learning as are related to agriculture and the mechanic arts." In compliance with this act the territorial legislature of 1881 passed an act establishing an agricultural college at Brookings, in the Territory of Dakota.

The legislature of 1883 provided for the erection of the first building. This building, now known as the Central Building, was built in 1884.

Upon the division of the Territory of Dakota into the States of North and South Dakota when admitted into the Union in 1889, the Agricultural and Mechanical College of Dakota became known as the South Dakota Agricultural College.

2. **PURPOSE.** The College is devoted to advancing the interests of practical education, its purpose being to give men and women such training as will best fit them for the active duties of life, whether it be in the fields, the shops, the house, or in the class or counting rooms.

In the act of the legislature establishing the institution it was designated "The Agricultural and Mechanical College," and in the Congressional act these colleges were spoken of as "Colleges of Agricultural and Mechanic Arts." While the school is popularly called the Agricultural College, the mere precedence of the

term does not make it more agricultural than mechanical.

In order to conform to the object for which the College was established, the legislature of 1907 changed the name to "The State College of Agriculture and Mechanic Arts."

Although the work of the institution is largely scientific, it is of such diversified character that the student can pursue work along almost any line which his tastes dictate. The aim of all the work offered is to fit young people to occupy ably any positions they may be called upon to fill, and to make better and more intelligent citizens of them.

A constant effort is made to reach the masses of the people in the state and interest them in the application of science to industrial pursuits, and in the more general improvement of their home life and every day activities.

3. LOCATION. The College is located in the east central part of the state, upon an eminence one mile from the business center of the city of Brookings, and four miles from the Big Sioux River.

Brookings has a population of about three thousand five hundred thrifty, intelligent and hospitable people. Its streets are lined with trees and there are very few houses where there are not well kept lawns, upon which are growing trees, beautiful flowering shrubs and plants. It has often been called the City of Homes.

It is a city of clean morals. No saloon has been allowed within its limits for several years. In the spring election of 1898 the proposition to allow saloons within the city limits was defeated by a vote of three to one, and in the general election of 1896 Brookings County was the banner county of the state in its vote against allowing intoxicating liquors to be sold in the state.

It is situated on the Central Dakota Division of the Chicago & North-Western Railway, three miles from its junction with the Watertown branch of the same road, which makes connections with the main line at this point.

4. SOURCES OF INCOME.—By the Congressional act under which South Dakota became a state, one hundred and sixty thousand acres of land were set aside as an endowment for the South Dakota College of Agriculture and Mechanic Arts. These

lands are all selected; very little has as yet been sold. A small amount is now being received yearly as rental from the selected lands.

No school lands can be sold for less than ten dollars per acre, so that these lands, when sold, will probably yield an endowment of two million dollars, the interest from which will be sufficient for the needs of the College.

The Morrill Act passed by Congress in 1890 provides a yearly appropriation for "the more complete endowment and support of colleges for the benefit of agriculture and mechanic arts." Under this act the College, at present, receives from the general government the sum of \$25,000 per annum.

An act making appropriation for the Department of Agriculture, approved March 4, 1907, makes provision for the further endowment and support of these colleges. As the bill was first introduced by Senator Knute Nelson, of Minnesota, the fund is popularly known as the Nelson Fund. It stipulates that the expenditure of the fund shall be governed in all respects by the provisions of the Morrill Act. "PROVIDED, That said colleges may use a portion of this money for providing courses for the special preparation of instructors for teaching the elements of agriculture and the mechanic arts." This act carries an appropriation of \$5,000 for the year 1907-1908, and increases \$5,000 each year until it reaches \$25,000 per annum.

The Hatch Act passed by Congress provides for the establishment of agricultural experiment stations in connection with agricultural colleges, and allows \$15,000 per year for the maintenance of the same.

The Adams Act passed by Congress and signed by the President, March 20th, 1906, increases the annual appropriation to agricultural experiment stations. This act carries an appropriation of \$5,000 for the first year and increases \$2,000 each year until it reaches \$15,000 per annum. The first appropriation under this act became available July 1st, 1906.

The State Legislature makes biennial appropriations for the support of the College. At its last session about one hundred thirty-four thousand dollars were appropriated.

5. GENERAL POLICY. It is the policy of the institution to make itself in truth a part of the common school system;

first, by continuing the work of the young people from the point in their education where the lower school stops, thus giving them an opportunity to become liberally and practically educated within the boundaries of their own state; second, by assisting in the training of public school teachers, especially in the various sciences.

6. EXPERIMENT STATION.—This department is organized under the Hatch Act of Congress which appropriates fifteen thousand dollars from the United States Treasury each year for its maintenance.

“It shall be the object and duty of said experiment stations to conduct original researches, and verify experiments on the physiology of plants and animals,”—enumerating some twenty other lines of research—“and such other experiments bearing directly on the agricultural industry of the United States as may in each case be deemed advisable, having due regard to the varying conditions and needs of the respective states; to aid in acquiring and diffusing among the people of the United States useful and practical information on the subjects connected with agriculture.” The South Dakota station conducts its investigations principally upon the following lines: live stock, soil, field experiments, greenhouse work, trees and small fruits, chemistry of plant growth and foods, and economic botany, entomology and zoology.

In planning the work of the station the main object sought is to assist the agricultural interests of the state. Education is derived from this in two ways; first, from the students' observation of the actual work; second, by reading the accounts and results of the work which are published in the form of bulletins and are available to anyone applying.

---

### B—Equipment

1. CAMPUS. The College campus of thirty acres is beautifully located on an eminence within the corporate limits of Brookings. Under the charge of the horticultural department the campus, ornamented with choice and tasteful varieties of trees and shrubs and laid out with necessary drives and walks, is a good example of landscape gardening. Adjoining on the rear is a fifty-acre plat which is devoted to horticultural gardens



and the United States forestry experiments. This portion is laid out regularly in suitably sized plats with longitudinal streets at appropriate distances apart, thus giving a beautiful and symmetrical effect to the observer from the College buildings.

2. BUILDINGS.—The oldest building on the campus, a three-story brick structure called the Central Building, was completed in 1885, and is devoted to administrative and instructional purposes. The Station Building, also a three-story building, is occupied principally by the experiment station laboratories. The North Building is a four-story brick building, the first floor of which is used as a chapel room, the two floors above furnishing quarters for the art and domestic science departments. The Chemistry and Pharmacy Building, the Drill Hall and the Creamery are all two-story buildings of modern design, and well equipped with apparatus.

The Engineering and Physics Building, the Plant Breeding Building and the Greenhouse, by their substantial and imposing appearance, add much to the beauty of the campus, and furnish ample room for the departments which occupy them. Class rooms and fine laboratories are provided in the barn for work in soil physics, agriculture and allied subjects.

A modern central heating plant occupies a fine brick structure back of the main buildings.

3. FARM.—Set apart as the College farm is a tract of four hundred and eighty acres near the campus, about sixty acres of which are used by the Agricultural Experiment Station as an experimental farm. Here the field experiments with field crops, seed germination and soil preparation are conducted, and the student electing it can witness and actually participate in this scientific work. The remainder of the farm is used as a model stock and dairy farm under the direction of the professor of animal husbandry. Practical work and experiments involving the best farming practices for this region are given the students.

4. DORMITORIES.—Originally the institution provided dormitories for both sexes. But the attendance has increased so much more rapidly than the class room facilities that it has been necessary to convert the dormitories into rooms for the departments. For a period of years no living arrangements in connection with the College have been provided; but increased

difficulty in securing rooms in the city induced the legislature of 1907 to make an appropriation of \$50,000 for a dormitory for the young ladies. This building will be ready for occupancy September, 1908. For particulars concerning the dormitory, see paragraph 4 under "D."

5. LABORATORIES.—The work of the institution being so largely scientific in nature, well-fitted laboratories have been provided in all those departments where their use is made necessary by the most modern and approved educational methods. The farm with its equipment, together with the horticultural gardens and the greenhouse, serves as a laboratory for the departments of horticulture and agriculture.

6. GYMNASIUM.—The spacious gymnasium for the boys and the commodious physical culture rooms for the girls are well equipped with dumb-bells, Indian clubs, chest weights, and other apparatus to which additions are being made from time to time. Both of these departments have connected with them bath and toilet rooms of the most approved design, and the physical training is under the direction of competent instructors.

7. ATHLETIC GROUNDS.—In connection with the gymnasium a tract of land is used as a place for holding outdoor exercises and sports of an athletic character. These grounds are enclosed with a high board fence, and a comfortable amphitheatre affords a large seating capacity to spectators.

8. LIBRARY AND READING ROOM.—The library, occupying rooms on the first floor of the Central Building, contains over 10,000 bound volumes and about 6,000 pamphlets. The institution is a repository for the government and contains a set of government publications dating from 1886. Many of the more valuable sets have been extended to an earlier date. Care has been exercised in the selection of books, in order that each department may have proper reference books at the disposal of the students. The books are arranged according to the Dewey system of classification and are completely catalogued in the card catalogue. The library also receives the cards from the government, cataloguing the bulletins of the experiment stations and the publications of the United States Department of Agriculture. The files of many standard scientific and literary periodicals are kept bound. The reading room is abundantly

supplied with current periodicals and newspapers. The library is nearly all the time, day and evening, at the disposal of students for the purpose of study and reading. Someone is in charge at all times to give help and information to those using the library.

9. MUSEUMS.—The idea that museums are valuable as educational factors only as they furnish illustrative material for study has obtained in the collection of the various specimens and their arrangement in the several department museums. The zoological, botanical, geological, art and engineering departments have made especially good beginnings in getting together material for that purpose. Constant additions are being made, thereby increasing their worth as adjuncts to laboratory work. The different collections are kept in the departments to which they belong.

10. GENERAL STUDY ROOM.—A general study room for the young ladies, in conjunction with the necessary retiring rooms and toilet facilities, occupies part of the basement of the North Building. The ladies of Brookings have very generously furnished part of the fittings necessary to its home-like appearance.

11. LECTURE AND CLASS ROOMS.—The class rooms are fitted to accommodate from thirty to fifty students each. Lecture rooms are fitted with arm-rest chairs for ease in taking notes. The main lecture or assembly room is provided with opera chairs for seating about four hundred, and a fine electric dissolving projection lantern for illustrative purposes.

12. SANITARY CONDITIONS.—The water supply is of the very best, the water being of good quality and very pure. The rarity of zymotic and infectious diseases among the students is a proof that the sanitary conditions are excellent.

13. HEATING.—Good heating arrangements are a necessity in almost any climate, but in a cold climate their importance increases. The main buildings are all heated with steam generated in a central heating plant. This plant also furnishes steam for running the machinery in the shops and generating electricity for lighting. Largely for purposes of cheerfulness and ventilation, fireplaces are provided in some of the offices.

14. LIGHTING.—The College owns and controls its own elec-



tric light plant, thus making the light at all times available and economical. Some of the rooms are provided with gas, which for purposes of illumination is used in Welsbach burners, making a brilliant light.

15. POSTAL FACILITIES.—The College furnishes first-class postal facilities, the mail of the students being delivered in one of the buildings at convenient times during the day, making it unnecessary for them to walk to the postoffice.

---

### C—Administration

1. GOVERNING BOARD.—By an act of the legislature approved March 10, 1897, provision was made for the appointment of the Regents of Education, who should have charge of all the educational institutions of the state.

The law is, "The Governor, by and with the consent of the senate, shall appoint five persons of probity and wisdom from among the best and best known citizens, residents of different portions of the state, none of whom shall reside in the counties in which any of the state educational institutions are located, who shall be designated the Regents of Education." The terms of office of these regents, when first appointed, were of different lengths, and after the first terms, are each six years, thus making it a continuous body. Vacancies are filled by the Governor during the recesses of the senate. "The board shall organize by electing one of their members President, and by the election of a Secretary. Thus qualified and organized they shall have authority to make such rules as are necessary for their own government as a board and shall immediately assume the exclusive control and management of all the educational institutions which are maintained either wholly or in part by the state." Along this line the powers and duties of the regents are defined, among which important ones may be mentioned, to employ or dismiss members of the different faculties and other agents, to determine the proper number of teachers in said faculties, also their compensation and terms of employment, to establish departments, to settle upon courses of study, to determine the rules to be enacted for the government of students, to decide upon text books



to be used, to fix tuition fees, to guard against unwise duplications of departments, to confer degrees, to control the Agricultural Experiment Station, and to promote education among the farmers by providing for institutes; in fact, to make all regulations as to the executive and instructional functions of the educational institutions of the state. The regents govern the College largely through a regents' committee.

2. **FACULTY.**—The faculty, consisting of the president and professors, all of whom are elected by the regents, determine in large part the general policy of the College. The professors are heads of the different departments of instruction which they represent and are responsible to the president, who is in charge of all matters of administration. The president, in turn, is responsible to the regents for the whole work of the institution. In order to aid the president in his executive duties, he appoints, at the beginning of each college year, certain faculty committees, which take up such work as may be assigned them by the president and faculty, and thus greatly facilitate the transaction of business and economize the time of the faculty. (For list of committees for 1907-1908, see page 11.)

3. **STUDENT AFFAIRS.**—Students are allowed wide latitude in carrying on affairs which vitally concern themselves, such as athletic, literary, musical and social organizations. The faculty, in all these matters, retains an advisory interest and aims to assist the students in every possible way in making these elements especially helpful to the student body as a whole. In the matter of social enjoyments the faculty is disposed to allow a reasonable amount of time for recreation, and endeavors to contribute as far as possible towards making the students happy and contented.

4. **REQUIRED EXERCISES.**—There are certain requirements in the way of work required of every student, among which are military exercises and physical culture. These subjects are thought to be of sufficient importance that every student can take them with profit.

5. **STUDENTS' LIVING ARRANGEMENTS.**—The faculty maintains the right to pass upon the living arrangements of every non-resident student. Residents of the town with whom students are boarding or lodging are requested to co-operate with

the faculty in the efforts to improve the general condition of the students by exercising over them a careful supervision and reporting to the faculty any misconduct on the part of the students which may come to their notice. Upon coming to Brookings students should report at once to the President's office, where they will be furnished all possible information with reference to their living arrangements.

6. **STUDENT CONDUCT.**—The chief end of school life being to obtain thorough mental and moral discipline, it becomes incumbent upon the faculty to make the conditions as far as possible conducive to that attainment. No set regulations are expected to cover every contingency arising, but it is necessary that all students should recognize the fitness and importance of such restraints as are in force, and co-operate in securing their observance. In the absence of any rule applying, the student's own good judgment should suggest the proper procedure.

7. **TUTORING.**—Students absent from class or college exercises or otherwise being unable to keep up with the work of their classes, will at the suggestion of the head of the department arrange with a regular tutor of that department for assistance.

---

## **D—Special Information for Students**

1. **TIME TO ENTER.**—Students are admitted at any time and assigned to such classes as they are found best fitted to enter, but it is much better to commence at the beginning of the college year. No reduction in college fees is made when the student enters after the beginning of a term, and if a student enters later he will not under any condition be allowed to hold a class back. If a tardy beginning is imperative the student must arrange with a tutor to assist him in bringing up his work, in order that he may go on understandingly and without hindrance to the class.

2. **TERMS AND VACATIONS.**—The college year is divided into two semesters. The principal vacation of the year occurs in the summer, from the early part of June to the middle of September. The work of the first semester in 1908 begins September 16th and continues until January 29th. The Christmas vacation will extend from December 18th to January 4th. The

second semester will begin February 1st, continuing to the close of the college year, June 9th. The spring vacation will extend through the first week in April.

3. EXPENSES OF STUDENTS.—No young person should be deterred from obtaining a liberal education when such advantages as this college offers can be had at a nominal price. The registration fees are six dollars per semester and are payable at the time of registration. Books and stationery are furnished by the student. A laboratory fee of two dollars per semester is charged for the use of each laboratory in which a student takes work. An estimate of the yearly expenses of a student is given below in three grades, viz:

	Low.	Average.	Liberal.
Tuition and Incidental Fees...	\$ 12.00	\$ 12.00	\$ 12.00
Board and Room.....	125.00	155.00	160.00
Laundry .....	12.00	15.00	25.00
Books and Stationery.....	15.00	15.00	35.00
Laboratory Fees.....	0.00	3.00	8.00
	<hr/>	<hr/>	<hr/>
	\$164.00	\$200.00	\$240.00

Male students are expected to purchase uniforms, which range in cost from \$12.00 to \$18.00, and female students must furnish themselves with special costumes, which are not necessarily expensive, for use in physical culture.

Every effort is made by the officers of the institution to secure suitable and satisfactory boarding places for students and a special faculty committee has this matter in charge. The new dormitory will provide a large number of young women with comfortable homes and students of both sexes with table-board at a reasonable cost.

Good rooms can be secured in the city at private houses or hotels for 50 cents per week and upwards. There are also many places where rooms and board can be obtained at reasonable rates. A list of approved available places for boarding or rooming can, at any time, be obtained from the president of the College. The Christian Associations make it a point at all times to assist new students in finding proper living accommodations.

4. DORMITORY.—At the beginning of the next college year, September, 1908, a new dormitory for women students will be ready for occupancy.

This building is 120 by 50 feet in dimensions and three stories in height in addition to basement. In addition to preceptress and other lady teachers, matron and servants, it will provide a home for seventy women students.

Besides the general parlors and reception hall on the first floor, the second floor contains a general sitting room while on the third floor is a recreation hall suitable for parties and plays attended by girls only. Two bathrooms, toilet rooms and lavatories are also on each floor. In addition, each room is provided with a large closet and with stationary wash stand with hot and cold water.

Precautions have been taken to reduce danger from fire to a minimum. It is heated by steam, lighted by electricity and, in every respect, has the latest improvements and conveniences.

Each room is provided with two single cots or beds with mattress and pillow, two straight chairs, study table, dresser with mirror, rug and window shades. Bedding, towels and further articles of luxury or decoration must be provided by the students. Each girl should provide herself with mattress pad, two pairs of pillow cases, three sheets, two pairs of blankets, napkins, napkin ring, six towels and a clothes bag.

The basement is provided with a large dining room, kitchen, store rooms, laundry and rooms for the help. Here a boarding club will be conducted under the supervision of an experienced matron. Every effort will be made to provide wholesome fare at minimum cost to the students. The exact cost of board cannot now be stated, but it will be about \$2.50 per week. The club will be conducted on the cooperative plan. Payment of board must be made for four weeks in advance. At the end of the year any money unexpended will be returned to the students. No deduction for board will be made for less than a week's absence.

Occupants of the building will be given use of the laundry to do their own washing.

The cost of rooms in the hall varies from \$10 on the third floor to \$12 on the first floor per semester for each occupant,



two in a room. This fee includes both light and heat. It is expected that two young women will occupy a room. But a student desiring to room alone may do so by paying the double rate. Each occupant will be expected to take care of her own room. The room rent is payable in advance. No deductions are made for absences and no rent money is refunded after payment.

In addition to the above fees every student who rooms in the new dormitory pays \$2.00 each semester. This money must be forwarded with the application for the room. It will be used for general maintenance and repairs.

5. STUDENT LABOR.—The terms are so distributed through the year as to give the longest period of vacation possible in the summer, thus enabling students to earn money. There is a limited amount of paid labor about the institution which can be done by students and it is the policy of the regents to give as much work to deserving students as is consistent with the best interests of all. However, no one should expect to earn his entire expenses while at college and doing school work, or be assured of an income in advance from paid labor.

6. SCHOLARSHIPS.—The following article from the law, defining powers and duties of the regents of education, is self-explanatory: "The Regents of Education shall fix all rates of tuition and of other fees to be paid by students, but such rates must be the same in all the different institutions. They may receive free of tuition two students appointed by each senator and one by each representative of the state legislature in any one of the institutions under their control, provided that the period for which appointment was made shall expire with the term of office of said senator or representative, and provided that such appointees shall comply with all the rules and requirements of the institution which they desire to enter. No student, however, shall receive any other gratuity whatever." The regents of education make this article operative in the case of this institution.

7. CO-EDUCATION.—Recognizing the value of industrial training as a feature of a practical institution for the masses, the College authorities have provided the various shops and laboratories in which the young men of the state may become

familiar with the uses of the different tools required in the principal mechanical industries. These special facilities are not confined to the young men, but special departments such as home economics, art and music have been established, so that the young lady students may have opportunities to fit themselves for a keener appreciation of the realities and enjoyments of life in the home, the school room, the store, the office or the factory. The young woman will profit as much by the introduction of rational methods into her education as the young man, and while the shops, studios and laboratories may be used in some instances by the young man, and in others by the young woman, they are all open to both and in most cases students of both sexes will be seen working side by side. Instead of military drill the young lady students are required to take physical culture.

8. **MILITARY REQUIREMENTS.**—The national law organizing and endowing these agricultural colleges requires that military science shall form part of the instruction offered. For the regulations governing these requirements, see the military department.

9. **PHYSICAL CULTURE.**—Physical culture is required of female students twice a week for the first three continuous years of the time they are students in the institution, or until the sophomore year is completed. Students taking physical culture will furnish special costumes for the same as indicated by the instructor. In regard to excuses from physical culture, the same rule holds as in the case of military exercises.

10. **CHAPEL EXERCISES.**—Chapel exercises are held on each college day and all students are cordially invited to attend. The exercises on Tuesday usually consist of announcements and an address by some competent person. Attendance on Tuesdays is required of all students.

11. **PUBLIC ENTERTAINMENTS.**—In all cases of public entertainments the students taking part are required to submit their exercises first to the officer regularly in charge of such work and to rehearse before the instructor in elocution at least ten days before the day of public performance, and as often as the instructor may designate.

12. **ATHLETICS.**—Many forms of athletic exercises are practiced and are recommended and encouraged by the officers

of the college. Under the auspices of the local organization and a number of college athletic associations of the state, all kinds of athletic sports are practiced and encouraged. The local representatives contest at the "State Meet" once a year for athletic honors. Students should understand, however, that their studies must receive the first consideration; and that the purpose of athletic exercises is to develop gentlemanly and lady-like qualities in those who participate in them.

13. STUDENT ORGANIZATIONS.—In the matter of student societies, the faculty allows the greatest freedom consistent with the general welfare. Those organizations which receive financial support from the student body and the general public are required to submit, at the close of the school year, a detailed report to the proper committee from the faculty.

14. LITERARY SOCIETIES.—A generous and fruitful rivalry for college honors exists between them, stimulating each to its best efforts. These societies are an important factor in the students' education and all are strongly advised to become members. All preparatory students are expected to become members of the Franklin society. The work of this society is carried on under the supervision of the head of the preparatory department and has a special function as a preparation for college society work. The faculty, realizing the value of society work, has offered a trophy to be competed for by the Athenian and Miltonian Literary Societies. These societies are composed entirely of college students and meet in their respective halls on every Saturday evening.

15. CHRISTIAN ASSOCIATIONS.—In state schools the Young Men's and the Young Women's Christian Associations occupy unique positions. They are the only organizations whose primary object is the moral development of the student body. Their platforms are broad enough to allow every student of whatever belief, who stands for cleanness and kindness, to affiliate himself or herself with them. The effect of belonging to such organizations, in whose membership are represented many beliefs among the students of forty nations, cannot help but be broadening and helpful; and a membership card secures the privileges of membership in every association. The purpose of the associations is to present the value of Christian living to the student,



and to the state, and to create an atmosphere of good-fellowship among brotherly men and womanly women. The Young Men's Christian Association is personally supervised by the state secretary of South Dakota, who is engaged to spend half time at the South Dakota State College. The Young Women's Christian Association is supervised by the state and international college secretaries. If prospective men students will write to Mr. George C. Phillips, Webster, South Dakota, and prospective women students to Miss Amy Ladd, Brookings, South Dakota, these persons will be glad to arrange for meeting them at the train and helping to secure boarding and rooming places.

16. ORATORICAL ASSOCIATION.—The purpose of this organization is to promote the art of public speaking among the students of the college. Each year it sends a representative selected in a preliminary contest to the inter-collegiate contest of the state. In order that this contestant may fully represent the college, the faculty has imposed the requirement that those competing for this honor must be pursuing regular work for the Bachelor's degree.

17. OTHER ORGANIZATIONS.—Among other organizations may be mentioned the Athletic Association, which concerns itself with the athletic interests of the college; and technical societies, such as the Art Club, Pharmacy Club, Choral Union, Euterpe Society, etc., each occupying its own sphere of influence.

18. PRIZES.—Business men of the city have taken an active interest in certain lines of college work, and in order to stimulate interest in those lines have offered prizes to be competed for annually by the students. The following prizes are offered:

Twenty dollars, cash prize, by Mr. Horace Fishback, to the student winning first place in the local oratorical contest.

Ten dollars, cash prize, by Mr. Horace Fishback, to the student winning second place in the local oratorical contest.

Ten dollars, photographic work, by Mr. Clarin, to the student winning first place in the local oratorical contest.

Five dollars, photographic work, by Mr. Clarin, to the student winning second place in the local oratorical contest.

Ten dollars, cash prize, by Dr. J. G. Parsons, to the stu-



dent presenting the best paper upon some scientific subject. This year the subject is "The Doctrine of Evolution."

Ten dollars, cash prize, by Dr. E. C. Miller, for the most complete set of drawings on the anatomy of the cat.

Additional information concerning the prizes offered by Dr. Parsons and Dr. Miller may be obtained from the department of zoology.

9. STUDENT PUBLICATIONS.—"The Industrial Collegian" is a sixteen-page monthly magazine published by the students of the college. It aims not only to be an organ of the student body but a mirror of student life at this institution. The editorial staff is composed of the Editor-in-Chief, a Business Manager, and one member selected by each regularly organized literary society in the College. The Editor-in-Chief and Business Manager are selected by the students who are at the time of such election bona fide subscribers of the paper.

"The Jack Rabbit," an annual gotten out by the junior class, is a good representative and an exponent of college life.

20. COLLEGE WORK.—The instructional work of the institution divides itself naturally into two main classes, studies which lie at the foundation of the agricultural processes and those which bear more directly upon technological lines of work, such as mechanical, electrical and civil engineering. The work of the college is moreover offered in such a way as to be best adapted to individual characteristics and needs and at the same time to secure for all a well rounded and symmetrical development.

21. GENERAL CONDITIONS OF ADMISSION.—The candidate for admission to the College must be at least fourteen years of age and of good moral character. Students applying for entrance to the preparatory department must present evidence that they have completed the work of the public schools as far as the ninth grade, and no one is allowed to pursue the work of the freshman year or higher work until grades in the preparatory years have been obtained.

22. TIME OF ENTRANCE EXAMINATION.—The first two days of the first semester will be devoted to examining students applying for admission, both to the College and the preparatory department.

23. ENTRANCE CONDITIONS.—A student may be admitted

to the College without having passed in one or two of his entrance studies. These shall stand against him and must be cleared up within one year after entrance or the student will be required to take the subject with the regular classes.

24. CREDITS FROM EXAMINATIONS.—Students will be allowed to take examinations in any subject offered without being regular members of the class pursuing that subject, if they have standings in all the prerequisites to that subject, provided that the head of the department concerned is convinced that the subject has been covered in a satisfactory manner; and having passed in the subject, students shall receive due credit therefor.

25. ADMISSION FROM OTHER INSTITUTIONS.—Students will be admitted to the College upon certificates from other reputable institutions, provided that these show that the students were honorably dismissed from those institutions, and have satisfactorily completed the work for which credit is asked. The College reserves the right, however, to cancel grades accepted from other schools should the student be found deficient in the subjects for which credit has been given.

26. SPECIAL STUDENTS.—Students of mature years who have passed in the work of the preparatory department may be allowed to pursue special studies if not candidates for a degree, but they must satisfy the faculty that they are qualified to take up the studies desired.

27. VALUE OF A SUBJECT DEFINED.—A full subject is one which requires five periods of lecture, recitation or laboratory work per week. The lecture and recitation periods are each one hour, the laboratory periods two hours in length. The nature of a study and the number of periods per week are indicated by the small letters *a* and *b* together with numbers, written immediately after the name, *a* signifying lecture or recitation work, *b*, laboratory work.

28. METHOD OF REGISTRATION.—The student should obtain a classification card in the registrar's office upon which is written the names of the subjects to be pursued, according to the rules governing classification. The classification committee of the faculty will furnish all possible assistance in classifying students. New students must also fill out and file with the registrar cards giving desired information concerning themselves. Stand-

ings from the public schools or other educational institutions should also be filed with the registrar at this time. Upon receipt of the fees for the term, the secretary of the College stamps the classification card, which is then to be presented to the different instructors under whom work is to be taken for their signatures, and in order that they may also enroll the student in their classes. This card should then be returned to the registrar. In no case should it be retained longer than three days after being issued.

No student will be allowed to classify for more than twenty hours' work unless an average standing of 85 has been maintained in the work of the preceding semester, nor for less than fifteen hours' work without special permission from the Classification Committee. Work taken under a tutor must be placed on the classification card the same as regular work, and signed for by the head of the department.

No senior who has at the beginning of the second semester more than four full subjects or their equivalent to complete for graduation will be allowed to complete the work and graduate at the end of the year.

29. GRADES.—All grades are reported to the registrar in figures on a scale of 100 as perfect. Grades are reported to students in classes as follows: Class "A," representing grades between 90 and 100. Class "B" from 80 to 90. Class "C" from 70 to 80. Classes "D" and "F" for all grades below 70. Students having a term grade of "A" may not be required to take final examination with their class. Grade "D" indicates that the student is conditioned, and may make up the work under a tutor, providing that this is done before the subject is again offered. "F" indicates that the subject in question must be repeated with a regular class before a passing grade is obtained.

In determining a final grade ordinarily twice the recitation grade is added to the final examination grade and one-third of the sum is the "final grade." Large latitude is given the teacher, especially in the more advanced work, in the determination of the student's final grade.

30. CONDITIONED STUDENTS.—No student is allowed to register for advanced work who is conditioned in more than one subject pursued in any one preceding semester; neither will a



student be permitted to register for advanced work at the beginning of any college year with more than one condition from previous work except when the student by permission changes his major and minor and satisfies the faculty that he is unable to remove conditions.

31. ATTENDANCE AND DISMISSAL.—Students are expected to attend regularly all the exercises of the classes to which they are assigned from the date of their classification. When once classified they are required to be present from the beginning of each semester thereafter, until regularly dismissed.

When a student finds it necessary to be absent he should get an excuse in advance, if possible. Otherwise he should present a properly written request for an excuse to his instructor by the second day after his return to class. Excuses will be granted only when the absence seems necessary.

Unexcused absences from classes are reported by the instructors to the registrar. Any student having three unexcused absences will have his case referred to a special committee for investigation. Should a student find it necessary to be late to his class he should make a satisfactory explanation at the close of the period to his instructor, otherwise the tardiness will be marked unexcused. Three unexcused tardinesses will count as an unexcused absence.

All omitted work must be made up within two weeks after return to college duties, unless the health of the student requires a longer period. This omitted work must be made up according to the direction of the instructor and at times designated by him or the tutor in charge of same. Should a student find it necessary to sever his connection with the institution before his work is completed at any time during the semester, he should report to the president his reasons and secure an honorable dismissal; otherwise no standings will be entered in the records giving him credit for work done during the semester.

32. CHARGE FOR TUTORING.—The charges which tutors are allowed for giving instruction are graded according to the nature of the work and the number of students taking work together, and for single periods, the maximum length of which is one hour, are shown by the following scheme:



Number of students.....	1	2	3	4	5	6 or more
First year preparatory sub- jects .....	15c	25c	35c	40c	45c	50c
Second and third year pre- paratory subjects .....	20c	30c	40c	45c	50c	55c
Fresh. and soph. subjects....	25c	35c	45c	50c	55c	60c
Junior and senior subjects....	30c	40c	50c	55c	60c	65c

In the absence of any instruction from the teacher as to the time a student should spend with a tutor in making up work, the tutor should see that the student covers the work which the teacher has assigned.

Students will be held responsible by the faculty for the payment of tutor fees. These must be paid to the respective heads of departments who will hand the same over to the tutors as soon as satisfactory reports concerning the work done have been received from the latter.

Should a student be absent from an appointment which has been made with a tutor, he shall be required to pay the same fee as if he had been present.

33. DEGREES.—Students who complete the two years' pharmacy course receive the degree of Pharmacy Graduate (Ph. G.).

Those who complete the full four years' course in either agriculture, horticulture, domestic science, general science, mechanical engineering, electrical engineering or civil engineering, receive the degree of Bachelor of Science (B. S.) in the above specified lines of work which they pursue. For this degree the student must complete in a satisfactory manner the work of one of the schemes mentioned in paragraph 36.

The advanced degree of Master of Science (M. S.) will be conferred upon students who complete the appropriate undergraduate course in any of the above lines of study and an additional amount of work equal to ten five-hour subjects to be chosen along appropriate lines and in not more than two departments, in each of which credit for at least four collegiate five-hour subjects has already been obtained, the advanced work to be done as prescribed by the faculty. Six or more of the subjects, constituting the "major," must be chosen from one department. At least one year of this work must be done while in residence.

In order to meet a constantly increasing demand for better

equipped, and more thoroughly trained men along the several lines of engineering activities, an additional or fifth year course of study is offered in the three engineering departments. Upon the completion of this additional year's work, the advanced degree, "Mechanical Engineer" (M. E.), "Electrical Engineer" (E. E.), "Civil Engineer" (C. E.), will be conferred.

This work is nearly all prescribed and is a continuation of the work pursued in the undergraduate courses, and is intended more fully to equip the student with special training along the particular line of work which he desires to pursue after leaving college.

34. DEPARTMENT.—Every student is allowed the fullest freedom of conscience and is supposed to have well grounded habits of politeness, industry, punctuality and integrity, but certain faculty regulations are necessary. Smoking is prohibited upon the college grounds. Few rules are made by the authorities, but for disregard of duties, the breaking of rules, or any ungentlemanly or unladylike conduct proper punishment will be inflicted.

35. SPECIAL COURSES.—The College also offers special courses in several important and practical lines of work. These are mentioned in connection with the departments principally concerned or in the description of the special short industrial courses, and are as follows:

1. Two years' work in pharmacy.
2. One year's work in business branches.
3. One year's work in amanuensis branches.
4. Five months' work in steam engineering.
5. Two weeks' work in dairy science.
6. Thirteen weeks' work in domestic science.
7. Special work in vocal and instrumental music.
8. Special work in art.
9. Lectures on animal husbandry, six weeks.
10. Lectures on farm practice, six weeks.
11. Lectures on horticulture, six weeks.
12. Lectures on veterinary medicine, six weeks.
13. Lectures on poultry husbandry, two weeks.
14. Lectures on corn judging, two weeks.
15. Lectures on stock judging, two weeks.

36. SCHEMES OF STUDY.—The work leading to a Bachelor's degree may be done according to any one of the courses mapped out on pages — to —. Through these the work of the College is adapted not only to different classes of students, but to individual students themselves. The entrance requirements to each of these groups is the work of the three preparatory years.

The notation immediately after the name of a subject indicates its nature and the number of times it occurs a week, *a* referring to the class work, and *b* to the laboratory exercises. For requirements in military exercises and physical culture see military department and department of elocution and physical culture.

## AGRICULTURE

### FRESHMAN YEAR.

#### First Semester—

Rhetoric, a 4.....	English	7
Elementary Chemistry, a & b 5.....	Chemistry	1
Plane Trigonometry, a 2.....	Mathematics	9
Stock Judging, a 4.....	Agriculture	1
Military, 3 .....		
Elective, a 4.....		
French, a 4.....	French	1
German, a 4.....	German	1

#### Second Semester—

Rhetoric, a 4.....	English	8
Elementary Chemistry, a & b 5.....	Chemistry	2
Surveying, b 2.....	Civil Engineering	2
Breeds of Live Stock and Stock Breeding, a 4.....	Agriculture	2
Military, 3 .....		
Elective, a 4.....		
French, a 4.....	French	2
German, a 4.....	German	2

### SOPHOMORE YEAR.

#### First Semester—

General Zoology and Physiology, a 2, b 3.....	Zoology	2
General Botany, a 2, b 3.....	Botany	1
Quantitative Chemistry, a & b 5.....	Chemistry	3

---

Military, 3 .....	
Elective, a 4.....	
French, a 4.....	French 3
German, a 4.....	German 3

## Second Semester—

General Zoology and Physiology, a 2, b 3.....	Zoology 3
General Botany, a 2, b 3.....	Botany 2
Agricultural Chemistry, a 3.....	Chemistry 6
Genetics, a 2.....	Horticulture 2
Military, 3 .....	
Elective, a 4.....	
French, a 4.....	French 4
German, a 4.....	German 4

## JUNIOR YEAR.

## First Semester—

## Animal Husbandry Group.

Advanced Rhetoric, a 2.....	English 11
History, Medieval, a 3.....	History 7
Psychology, a 3.....	Philosophy 1
General Physics, a 3, b 2.....	Physics 3
Entomology, a & b 2.....	Entomology 3
Stock Judging, a 2.....	Agriculture 3
Elocution, a 1.....	Elocution 5

## Horticulture Group.

Advanced Rhetoric, a 2.....	English 11
History, Medieval, a 3.....	History 7
Psychology, a 3.....	Philosophy 1
General Physics, a 3, b 2.....	Physics 3
Entomology, a & b 2.....	Entomology 3
Pomology, a 2.....	Horticulture 1
Elocution, a 1.....	Elocution 5

## Veterinary Group.

Advanced Rhetoric, a 2.....	English 11
History, Medieval, a 3.....	History 7
Psychology, a 3.....	Philosophy 1
General Physics, a 3, b 2.....	Physics 3
Veterinary Anatomy, a & b 5.....	Veterinary 1



## Agronomy Group.

Advanced Rhetoric, a 2.....	English 11
History, Medieval, a 3.....	History 7
Psychology, a 3.....	Philosophy 1
General Physics, a 3, b 2.....	Physics 3
Soils, a & b 5.....	Agriculture 4

## Dairy Group.

Advanced Rhetoric, a 2.....	English 11
Psychology, a 3.....	Philosophy 1
General Physics, a 3, b 2.....	Physics 3
Bacteriology, a & b 5.....	Veterinary 8
Farm Dairy Products, a 2, b 1.....	Dairy 1
Elocution, a 1.....	Elocution 5

## Second Semester—

## Animal Husbandry Group.

Advanced Rhetoric, a 2.....	English 12
History, Modern, a 3.....	History 8
Ethics, a 3.....	Philosophy 2
Entomology, a & b 2.....	Entomology 4
Horse Shoeing and Lameness, a 2.....	Veterinary 5
Farm Crops, a & b 5.....	Agriculture 6
Elocution, a 1.....	Elocution 6

## Horticulture Group.

Advanced Rhetoric, a 2.....	English 12
History, Modern, a 3.....	History 8
Ethics, a 3.....	Philosophy 2
Entomology, a & b 2.....	Entomology 4
Floriculture and Market Gardening, a 2.....	Horticulture 3
Farm Crops, a & b 5.....	Agriculture 6
Elocution, a 1.....	Elocution 6

## Veterinary Group.

Advanced Rhetoric, a 2.....	English 12
History, Modern, a 3.....	History 8
Ethics, a 3.....	Philosophy 2
Veterinary Anatomy, a & b 5.....	Veterinary 2
Horse Shoeing and Lameness, a 2.....	Veterinary 5
Veterinary Materia Medica, a 3.....	Pharmacy 10

## Agronomy Group.

Advanced Rhetoric, a 2.....	English	12
History, Modern, a 3.....	History	8
Ethics, a 3.....	Philosophy	2
Soils, a & b 5.....	Agriculture	5
Farm Crops, a & b 5.....	Agriculture	6

## Dairy Group.

Advanced Rhetoric, a 2.....	English	12
Ethics, a 3.....	Philosophy	2
Chemistry of Foods, a & b 5.....	Chemistry	4
Inspection and Testing of Dairy Products, a 2, b 1.....	Dairy	2
Dairy Bacteriology, a 2, b 1.....	Dairy	3
Elocution, a 1.....	Elocution	6

## SENIOR YEAR.

## First Semester—

## Animal Husbandry Group.

Political Economy, a 3.....	History	11
Geology, a 5.....	Geology	1
Veterinary Medicine, a 5.....	Veterinary	6
Stock Feeding, a 2.....	Agriculture	7
Farm Dairy Products, a 2, b 1.....	Dairy	1

## Horticulture Group.

Political Economy, a 3.....	History	11
Geology, a 5.....	Geology	1
Soils, a & b 5.....	Agriculture	4
Plant Anatomy and Physiology, a 1, b 2.....	Botany	3
Mycology and Plant Pathology, b 2.....	Botany	4

## Veterinary Group.

Political Economy, a 3.....	History	11
Histology, a & b 5.....	Zoology	6
Veterinary Medicine, a 5.....	Veterinary	6
Veterinary Anatomy, a & b 5.....	Veterinary	3

## Agronomy Group.

Political Economy, a 3.....	History	11
Geology, a 5.....	Geology	1
Entomology, a & b 2.....	Entomology	3

Stock Feeding, a 2.....	Agriculture	7
Farm Crops, a 1.....	Agriculture	9
Plant Anatomy and Physiology, a 1, b 2.....	Botany	3
Mycology and Plant Physiology, b 2.....	Botany	4

#### Dairy Group.

Political Economy, a 3.....	History	11
Medieval History, a 3.....	History	7
Industrial Chemistry, a 3.....	Chemistry	7
Stock Feeding, a 2.....	Agriculture	7
Veterinary Medicine, a 5.....	Veterinary	6
Dairy Technology, a 2.....	Dairy	5

#### Second Semester—

#### Animal Husbandry Group.

Sociology, a 3.....	History	12
Veterinary Medicine, a 5.....	Veterinary	7
Stock Feeding, a 3.....	Agriculture	8
Farm Mechanics, a 2.....	Agriculture	11
Farm Management, a 3.....	Agriculture	12
Forestry, a 3.....	Horticulture	4

#### Horticulture Group.

Sociology, a 3.....	History	12
Taxonomy, a 2, b 3.....	Botany	5
Soils, a & b 5.....	Agriculture	5
Farm Mechanics, a 2.....	Agriculture	11
Landscape Gardening, a 1, b 1.....	Horticulture	5

#### Veterinary Group.

Sociology, a 3.....	History	12
Histology, a & b 5.....	Zoology	7
Veterinary Medicine, a 5.....	Veterinary	7
Veterinary Anatomy, a & b 5.....	Veterinary	4

#### Agronomy Group.

Sociology, a 3.....	History	12
Taxonomy, a 2, b 3.....	Botany	5
Farm Management, a 3.....	Agriculture	12
Farm Mechanics, a 2.....	Agriculture	11
Entomology, a & b 2.....	Entomology	4
Farm Crops, a 3.....	Agriculture	10

## Dairy Group.

Sociology, a 3.....	History 12
History, Modern, a 3.....	History 8
Stock Feeding, a 3.....	Agriculture 8
Operation of Creameries and Cheese Factories, a 3, b 2....	Dairy 4
Dairy Farm Management, a 2, b 1.....	Dairy 6
Dairy Research, a 3.....	Dairy 7

**HOME ECONOMICS**

## FRESHMAN YEAR.

## First Semester—

Rhetoric, a 4.....	English 7
Food and Dietetics, a 4, b 1.....	Home Economics 1
Elementary Chemistry, a & b 5.....	Chemistry 1
Physical Culture, 2.....	
Elective, a 4.....	
French, a 4.....	French 1
German, a 4.....	German 1
Latin, a 4.....	Latin 5

## Second Semester—

Rhetoric, a 4.....	English 8
Sewing, b 3.....	Domestic Art 3
Elementary Chemistry, a & b 5.....	Chemistry 2
Theory of Design, a 2.....	Art 3
Physical Culture, 2.....	
Elective, a 4.....	
French, a 4.....	French 2
German, a 4.....	German 2
Latin, a 4.....	Latin 6

## SOPHOMORE YEAR.

## First Semester—

Chaucer and History of the English Language, a 4.....	English 9
Quantitative Chemistry, a & b 5.....	Chemistry 3
General Botany, a 2, b 3.....	Botany 1
Physical Culture, 2.....	
Elective, a 4.....	
French, a 4.....	French 3
German, a 4.....	German 3
Latin, a 4.....	Latin 7



## Second Semester—

The Elizabethan Drama, a 4.....	English	10
Chemistry of Foods, a & b 5.....	Chemistry	4
General Botany, a 2, b 3.....	Botany	2
Physical Culture, 2.....		
Elective, a 4.....		
French, a 4.....	French	4
German, a 4.....	German	4
Latin, a 4.....	Latin	8

## JUNIOR YEAR.

## First Semester—

Advanced Rhetoric, a 2.....	English	11
History, Medieval, a 3.....	History	7
General Zoology and Physiology, a 2, b 3.....	Zoology	2
Bacteriology, a & b 5.....	Veterinary	8
Psychology, a 3.....	Philosophy	1

## Second Semester—

Advanced Rhetoric, a 2.....	English	12
History, Modern, a 3.....	History	8
Ethics, a 3.....	Philosophy	2
General Zoology and Physiology, a 2, b 3.....	Zoology	3
Application of Heat to Foods, a 3, b 2.....	Home Economics	3

## SENIOR YEAR.

## First Semester—

Political Economy, a 3.....	History	11
Art History, a 2.....	Art	6
Household Economy, a 2.....	Home Economics	7
Home Nursing and Invalid Cookery, a 3.....	Home Economics	5
Household Sanitation, a 3.....	Home Economics	4
Elective, a 3.....		
English Literature from 1625 to 1800, a 3.....	English	13
American History (1783-1829), a 3.....	History	9
French, a 3.....	French	5
German, a 3.....	German	5
Latin, a 3.....	Latin	9
History of Education, a 3.....	Philosophy	3
History of Music, a 3.....	Music	5
Theory of Interpretation and Musical Forms, a 2.....	Music	4
Nature Study, a 3.....	Entomology	5

---

Plant Anatomy and Physiology, a 1, b 2.....	Botany	3
Mycology and Plant Pathology, b 2.....	Botany	4

## Second Semester—

Sociology, a 3.....	History	12
Astronomy, a 4.....	Mathematics	15
Art History, a 2.....	Art	7
Original Investigation, b 2.....	Home Economics	9
Elective, a 5.....		
Nineteenth Century Poetry, a 3.....	English	14
American History (1829-1865), a 3.....	History	10
French, a 3.....	French	6
German, a 3.....	German	6
Latin, a 3.....	Latin	10
Methods of Teaching, a 3.....	Philosophy	4
History of Music, a 3.....	Music	8
Theory of Interpretation and Musical Forms, a 2.....	Music	7
Teaching of Home Economics, a 2.....	Home Economics	8
Taxonomy, a 2, b 3.....	Botany	5

---

**MECHANICAL ENGINEERING**

## FRESHMAN YEAR.

## First Semester—

Rhetoric, a 4.....	English	7
Solid Geometry, a 3.....	Mathematics	7
Plane Trigonometry, a 2.....	Mathematics	9
Elementary Chemistry, a & b 5.....	Chemistry	1
Mechanical Drawing, b 5.....	Mechanical Engineering	5
Military, 3 .....		

## Second Semester—

Rhetoric, a 4.....	English	8
Advanced Algebra, a 3.....	Mathematics	8
Plane and Spherical Trigonometry, a 2.....	Mathematics	10
Elementary Chemistry, a & b 5.....	Chemistry	2
Machine Shop, b 3.....	Mechanical Engineering	3
Surveying, b 2.....	Civil Engineering	2
Military, 3 .....		

## SOPHOMORE YEAR.

## First Semester—

Analytic Geometry and Calculus, a 5.....	Mathematics	11
--	-------------	----

---

General Physics, a 3, b 2.....	Physics	3
French, a 4.....	French	1
Machine Shop, b 5.....	Mechanical Engineering	4
Military, 3 .....		

## Second Semester—

Calculus, a 5.....	Mathematics	12
General Physics, a 3, b 2.....	Physics	4
French, a 4.....	French	2
Descriptive Geometry, a 1, b 2.....	Mechanical Engineering	7
Machine Design, b 2.....	Mechanical Engineering	8
Military, 3.....		

## JUNIOR YEAR.

## First Semester—

Electricity and Magnetism, a 3, b 1.....	Electrical Engineering	1
Analytic Mechanics, a 5.....	Mathematics	13
Elements of Mechanism, a 3.....	Mechanical Engineering	10
Machine Design, b 4.....	Mechanical Engineering	9
Advanced Rhetoric, a 2.....	English	11

## Second Semester—

Steam Engines and Thermodynamics, a 5..	Mechanical Engineering	12
Dynamo Electric Machinery, a 3, b 2.....	Electrical Engineering	3
Mechanics of Materials, a 3.....	Mechanical Engineering	16
Gas and Oil Engines, a 2.....	Mechanical Engineering	11
Advanced Rhetoric, a 2.....	English	12

## SENIOR YEAR.

## First Semester—

Political Economy, a 3.....	History	11
Steam Boilers, a 2.....	Mechanical Engineering	13
Experimental Engineering, b 2.....	Mechanical Engineering	17
Engineering Design, b 5.....	Mechanical Engineering	19
Hydraulics, a 3.....	Civil Engineering	5
Contracts and Specifications, a 2.....	Civil Engineering	12
Power Transmission and Measurement, a 2.	Mechanical Engineering	23

## Second Semester—

General Astronomy, a 4.....	Mathematics	15
Strains in Framed Structures, a 3.....	Mechanical Engineering	15
Experimental Engineering, b 2.....	Mechanical Engineering	18

---

Engineering Design, b 3.....	Mechanical Engineering	20
Masonry and Foundations, a 2.....	Civil Engineering	9

---

**ELECTRICAL ENGINEERING****FRESHMAN YEAR.****First Semester—**

Rhetoric, a 4.....	English	7
Solid Geometry, a 3.....	Mathematics	7
Plane Trigonometry, a 2.....	Mathematics	9
Elementary Chemistry, a & b 5.....	Chemistry	1
Mechanical Drawing, b 5.....	Mechanical Engineering	5
Military, 3 .....		

**Second Semester—**

Rhetoric, a 4.....	English	8
Advanced Algebra, a 3.....	Mathematics	8
Plane and Spherical Trigonometry, a 2.....	Mathematics	10
Elementary Chemistry, a & b 5.....	Chemistry	2
Machine Shop, b 3.....	Mechanical Engineering	3
Surveying, b 2.....	Civil Engineering	2
Military, 3 .....		

**SOPHOMORE YEAR.****First Semester—**

Analytic Geometry and Calculus, a 5.....	Mathematics	11
General Physics, a 3, b 2.....	Physics	3
French, a 4.....	French	1
Machine Shop, b 5.....	Mechanical Engineering	4
Military, 3 .....		

**Second Semester—**

Calculus, a 5.....	Mathematics	12
General Physics, a 3, b 2.....	Physics	4
French, a 4.....	French	2
Descriptive Geometry, a 1, b 2.....	Mechanical Engineering	7
Machine Design, b 2.....	Mechanical Engineering	8
Military, 3 .....		

**JUNIOR YEAR.****First Semester—**

Analytic Mechanics, a 5.....	Mathematics	13
------------------------------	-------------	----



---

Electricity and Magnetism, a 3, b 1.....	Electrical Engineering	1
Elements of Mechanism, a 3.....	Mechanical Engineering	10
Machine Design, b 4.....	Mechanical Engineering	9
Telephone Engineering, a 2.....	Electrical Engineering	2
Advanced Rhetoric, a 2.....	English	11

## Second Semester—

Steam Engines and Thermodynamics, a 5..	Mechanical Engineering	12
Electro-Chemistry, a 3, b 1.....	Chemistry	8
Dynamo Electric Machinery, a 3, b 2.....	Electrical Engineering	3
Mechanics of Materials, a 3.....	Mechanical Engineering	16
Advanced Rhetoric, a 2.....	English	12

## SENIOR YEAR.

## First Semester—

Political Economy, a 3.....	History	11
Steam Boilers, a 2.....	Mechanical Engineering	13
Experimental Engineering, b 2.....	Mechanical Engineering	17
Alternating Currents, a 3, b 2.....	Electrical Engineering	4
Dynamo Design, b 3.....	Electrical Engineering	5
Hydraulics, a 3.....	Civil Engineering	5
Contracts and Specifications, a 2.....	Civil Engineering	12

## Second Semester—

General Astronomy, a 4.....	Mathematics	15
Electric Light and Power Distribution, a 3, b 2.....	Electrical Engineering	6
Experimental Engineering, b 2.....	Mechanical Engineering	18
Gas and Oil Engines, a 2.....	Mechanical Engineering	11
Masonry and Foundations, a 2.....	Civil Engineering	9

---

**CIVIL ENGINEERING**

## FRESHMAN YEAR.

## First Semester—

Rhetoric, a 4.....	English	7
Solid Geometry, a 3.....	Mathematics	7
Plane Trigonometry, a 2.....	Mathematics	9
Elementary Chemistry, a & b 5.....	Chemistry	1
Mechanical Drawing, b 5.....	Mechanical Engineering	5
Military, 3 .....		

## Second Semester—

Rhetoric, a 4.....	English	8
Advanced Algebra, a 3.....	Mathematics	8
Plane and Spherical Trigonometry, a 2.....	Mathematics	10
Elementary Chemistry, a & b 5.....	Chemistry	2
Surveying, a & b 5.....	Civil Engineering	1
Military, 3 .....		

## SOPHOMORE YEAR.

## First Semester—

Analytic Geometry and Calculus, a 5.....	Mathematics	11
General Physics, a 3, b 2.....	Physics	3
French, a 4.....	French	1
Surveying, a 2, b 3.....	Civil Engineering	3
Military, 3.....		

## Second Semester—

Descriptive Geometry, a 1, b 2.....	Mechanical Engineering	7
Calculus, a 5.....	Mathematics	12
General Physics, a 3, b 2.....	Physics	4
French, a 4.....	French	2
Topographical Surveying, a & b 2.....	Civil Engineering	4
Military, 3.....		

## JUNIOR YEAR.

## First Semester—

Analytic Mechanics, a 5.....	Mathematics	13
Elements of Mechanism, a 3.....	Mechanical Engineering	10
Hydraulics, a 3.....	Civil Engineering	5
Machine Design, b 4.....	Mechanical Engineering	9
Advanced Rhetoric, a 2.....	English	11

## Second Semester—

Geodesy, a & b 3.....	Civil Engineering	6
Mechanics of Materials, a 3.....	Mechanical Engineering	16
Water Supply, a 2.....	Civil Engineering	7
Irrigation, a 2.....	Civil Engineering	8
Masonry and Foundations, a 2.....	Civil Engineering	9
Advanced Rhetoric, a 2.....	English	12
Elective, 5.....		

## SENIOR YEAR.

## First Semester—

Political Economy, a 3.....	History 11
Sewerage, a 2.....	Civil Engineering 10
Roads and Pavements, a 2.....	Civil Engineering 11
Electricity and Magnetism, a 3, b 1.....	Electrical Engineering 1
Experimental Engineering, b 2.....	Mechanical Engineering 17
Geology, a 5.....	Geology 1
Contracts and Specifications, a 2.....	Civil Engineering 12

## Second Semester—

Experimental Engineering, b 2.....	Mechanical Engineering 18
General Astronomy, a 4.....	Mathematics 15
Strains in Framed Structures, a 3.....	Mechanical Engineering 15
Railroad Engineering, a 1, b 2.....	Civil Engineering 13
Dam and Reservoir Design, b 2.....	Civil Engineering 14
Elective, 5.....	.....

**FIFTH YEAR SUBJECTS FOR ENGINEERING DEGREES**

## MECHANICAL ENGINEERING

## First Semester—

Alternating Currents, a 3, b 2.....	Electrical Engineering 4
Statics, a 2.....	Mechanical Engineering 24
Structural Design, b 3.....	Mechanical Engineering 21
Thesis, a 2.....	Mechanical Engineering 26
*Elective, 5.....	.....

## Second Semester—

Kinematics, b 2.....	Mechanical Engineering 14
Heating and Ventilation, a 2.....	Mechanical Engineering 25
Railroad Engineering, a 1, b 2.....	Civil Engineering 13
Structural Engineering, b 2.....	Mechanical Engineering 22
Thesis, a & b 3.....	Mechanical Engineering 27
*Elective, 5 .....	.....

## ELECTRICAL ENGINEERING

## First Semester—

Polyphase Currents, a 3, b 2.....	Electrical Engineering 7
Power Transmission and Measurement, a 2.....	Mechanical Engineering 23
Electrical Design, b 3.....	Electrical Engineering 8
Thesis, a 2.....	Electrical Engineering 11
*Elective, a & b 5.....	.....

## Second Semester—

Design of Power Stations, a 3, b 2.....	Electrical Engineering 9
---	--------------------------

---

Installation and Testing of Power Plants, a 2, b 1.....	
.....	Electrical Engineering 10
Railroad Engineering, a 1, b 2.....	Civil Engineering 13
Thesis, a 3.....	Electrical Engineering 12
*Elective, a & b 5.....	

## CIVIL ENGINEERING

### First Semester—

Structural Design, a & b 5.....	Civil Engineering 15
Hydraulic Motors, a 3.....	Civil Engineering 17
Reinforced Concrete, a 3.....	Civil Engineering 18
Thesis, a 2.....	Civil Engineering 19
*Elective, 5 .....	

### Second Semester—

Structural Design, b 3.....	Civil Engineering 16
Steam Engines, a 3.....	Mechanical Engineering 12
Kinematics, b 2.....	Mechanical Engineering 14
Dynamo Electric Machinery, a 3, b 2.....	Electrical Engineering 3
Thesis, a & b 3.....	Civil Engineering 20
*Elective, 2 .....	

\*All Electives must be taken from one of the Engineering Departments.

---

## GENERAL SCIENCE

### FRESHMAN YEAR.

#### First Semester—

Rhetoric, a 4.....	English 7
Elementary Chemistry, a & b 5.....	Chemistry 1
Military, 3, or Physical Culture, 2.....	
Elective, a 9.....	
French, a 4 or.....	French 1
German, a 4, or.....	German 1
Latin, a 4.....	Latin 5
Food and Dietetics, a 4 b 1 or.....	Home Economics 1
Solid Geometry, a 3, and.....	Mathematics 7
Plane Trigonometry, a 2.....	Mathematics 9
One, and only one, language must be elected.	

#### Second Semester—

Rhetoric, a 4.....	English 8
--------------------	-----------



---

Elementary Chemistry, a & b 5.....	Chemistry	2
Military, 3, or Physical Culture, 2.....		
Elective, a & b 9.....		
French, a 4, or.....	French	2
German, a 4 or.....	German	2
Latin, a 4 .....	Latin	6
Home Nursing and Invalid Cookery, a 3.....	Home Economics	6
Clothing and Shelter, a 2.....	Home Economics	2
Or two of the three following subjects—		
Surveying, b 2.....	Civil Engineering	2
Plane and Spherical Trigonometry, a 2.....	Mathematics	10
Advanced Algebra, a 3.....	Mathematics	8
One, and only one, language must be elected.		

### SOPHOMORE YEAR.

#### First Semester—

Chaucer and History of the English Language, a 4.....	English	9
*General Zoology and Physiology, a 2, b 3.....	Zoology	2
Military, 3.....		
Elective, a & b 14.....		
French, a 4, or.....	French	3
German, a 4, or.....	German	3
Latin, a 4.....	Latin	7
General Botany, a 2, b 3.....	Botany	1
Analytic Geometry and Calculus, a 5.....	Mathematics	11
Quantitative Chemistry, a & b 5.....	Chemistry	3
Elocution, a 5.....	Elocution	1
General Physics, a 3, b 2.....	Physics	3
One, and only one, language must be elected.		

#### Second Semester—

The Elizabethan Drama, a 4.....	English	10
*General Zoology and Physiology, a 2, b 3.....	Zoology	3
Military, 3 .....		
Elective, a & b 14.....		
French, a 4, or .....	French	4
German, a 4, or.....	German	4
Latin, a 4.....	Latin	8
General Botany, a 2, b 3.....	Botany	2
Calculus, a 5.....	Mathematics	12
Volumetric Analysis and Drug Assaying, a & b 5..	Pharmacy	9
Elocution, a 5.....	Elocution	2
General Physics, a 3, b 2 .....	Physics	4
One, and only one, language must be elected.		

## JUNIOR YEAR.

## First Semester—

Advanced Rhetoric, a 2.....	English	11
History, Medieval, a 3.....	History	7
Psychology, a 3.....	Philosophy	1
General Physics, a 3, b 2.....	Physics	3
Elective, a & b 3.....		
Elocution, a 3.....	Elocution	3
Mechanical Drawing, b 3.....	Mechanical Engineering	5
American History (1783-1829), a 3.....	History	9
English Literature from 1625 to 1800, a 3.....	English	13
French, a 3.....	French	5
German, a 3.....	German	5
Latin, a 3.....	Latin	9
Histology, a & b 5.....	Zoology	6
Industrial Chemistry, a 3.....	Chemistry	7
Advanced Physics, a 4, b 1.....	Physics	5
Nature Study, a 3.....	Entomology	5
Plant Anatomy and Physiology, a 2, b 3.....	Botany	3
Mycology and Plant Pathology, b 2.....	Botany	4

## Second Semester—

Advanced Rhetoric, a 2.....	English	12
History, Modern, a 3.....	History	8
Ethics, a 3.....	Philosophy	2
General Physics, a 3, b 2.....	Physics	4
Elective, a & b 3.....		
Elocution, a 3.....	Elocution	4
Architectural Drawing, b 3.....	Mechanical Engineering	6
American History (1829-1865), a 3.....	History	10
Nineteenth Century Poetry, a 3.....	English	14
French, a 3.....	French	6
German, a 3.....	German	6
Latin, a 3.....	Latin	10
Histology, a & b 5.....	Zoology	7
Agricultural Chemistry, a 3.....	Chemistry	6
Genetics, a 2.....	Horticulture	2
Advanced Physics, a 4, b 1.....	Physics	6
Taxonomy, a 2, b 3.....	Botany	5

## SENIOR YEAR.

## First Semester—

Political Economy, a 3.....	History	11
-----------------------------	---------	----

Geology, a 5.....	Geology	1
Elective, a & b 9.....		
Advanced Physics, a 4, b 1.....	Physics	5
Architectural Design, b 5.....	Mechanical Engineering	6a
American Government.....	History	13
Nineteenth Century Prose, a 5.....	English	15
Materia Medica, a 5.....	Pharmacy	2
Analytic Mechanics, a 5.....	Mathematics	13
Art History, a 2.....	Art	6
Theory and Practice of Design, a & b 5.....	Art	4
History of Education, a 3.....	Philosophy	3
History of Music, a 3.....	Music	5
Theory of Interpretation and Musical Forms, a 2.....	Music	4
Comparative Anatomy of Vertebrates, a & b 5.....	Zoology	8
Bacteriology, a & b 5.....	Veterinary	8
Agricultural Analysis, a & b 5.....	Chemistry	5
Heat, a 3, b 1.....	Physics	7
Cytology and Botanical Methods, a 1, b 4.....	Botany	6
Nature Study, a 3.....	Entomology	5

## Second Semester—

Sociology, a 3.....	History	12
General Astronomy, a 4.....	Mathematics	15
Elective, a & b 9.....		
Advanced Physics, a 4, b 1.....	Physics	6
Perspective, b 5.....	Mechanical Engineering	6 b
American Government, a 3.....	History	14
Nineteenth Century History, a 2.....	History	16
The Civil War and Reconstruction Era, a 2.....	History	18
Nineteenth Century Prose, a 5.....	English	16
Materia Medica, a 5.....	Pharmacy	3
Analytic Mechanics, a 5.....	Mathematics	14
Art History, a 2.....	Art	7
Theory and Practice of Design, a & b 5.....	Art	5
Methods of Teaching, a 3.....	Philosophy	4
History of Music, a 3.....	Music	8
Theory of Interpretation and Musical Forms, a 2.....	Music	7
Comparative Anatomy of Vertebrates, a & b 5.....	Zoology	9
Chemistry of Foods, a & b 5.....	Chemistry	4
Light, a 3, b 1.....	Physics	8
Cytology and Botanical Methods, a 1, b 4.....	Botany	7

\*Students who intend to elect advanced work in Physics should take Physics 3 and 4 during the sophomore year and Zoology 2 and 3 during the junior year. Young ladies following the General Science scheme may elect Home Economics 4 and 7 in place of Physics 3, and Home Economics 3 in place of Physics 4.

**PHARMACY****FRESHMAN YEAR.****First Semester—**

Rhetoric, a 4.....	English	7
Elementary Chemistry, a & b 5.....	Chemistry	1
Solid Geometry, a 3.....	Mathematics	7
Plane Trigonometry, a 2.....	Mathematics	9
Elective, a 4.....		
French, a 4 or.....	French	1
German, a 4 or.....	German	1
Latin, a 4 .....	Latin	5

**Second Semester—**

Rhetoric, a 4.....	English	8
Elementary Chemistry, a & b 5.....	Chemistry	2
Advanced Algebra, a 3.....	Mathematics	8
Elementary Law, a 3.....	Commercial Science	9
Elective, a 4 .....		
French, a 4, or.....	French	2
German, a 4 or.....	German	2
Latin, a 4.....	Latin	6

**SOPHOMORE YEAR.****First Semester—**

Chaucer, History of the English Language, a 4.....	English	9
General Botany, a 2, b 3.....	Botany	1
General Physics, a 3, b 2.....	Physics	3
Elective, a 4.....		
French, a 4, or.....	French	3
German, a 4, or.....	German	3
Latin, a 4.....	Latin	7

**Second Semester—**

The Elizabethan Drama, a 4.....	English	10
General Botany, a 2, b 3.....	Botany	2
General Physics, a 3, b 2.....	Physics	4
Elective, a 4.....		
French, a 4, or.....	French	4
German, a 4, or.....	German	4
Latin, a 4.....	Latin	8



---

 JUNIOR YEAR.

## First Semester—

Anatomical Methods, a 3, b 2.....	Zoology	4
Quant. Chemistry, a & b 5.....	Chemistry	3
Pharmacy Latin, a 5.....	Pharmacy	1
Medieval History, a 3.....	History	7

## Second Semester—

Anat. Methods & Physiology, a 3, b 2.....	Zoology	5
Chemistry of Foods, a & b 5.....	Chemistry	4
Pharmacognosy, a & b 5.....	Botany	8
Modern History, a 3.....	History	8

## SENIOR YEAR.

## First Semester—

Materia Medica, a 5.....	Pharmacy	2
Pharmacy, a 5.....	Pharmacy	4
Pharmacy Laboratory, b 3.....	Pharmacy	5
Pharmaceutical Problems, a 2.....	Pharmacy	6
Bacteriology, a & b 5 .....	Veterinary	8

## Second Semester—

Materia Medica, a 5.....	Pharmacy	3
Pharmacy, a 5.....	Pharmacy	7
Pharmacy Laboratory, b 5.....	Pharmacy	8
Volumetric Anal. & Drug Assaying, a & b 5.....	Pharmacy	9

---

## TWO YEAR COURSE IN PHARMACY

## FIRST YEAR.

## First Semester—

Elementary Chemistry, a & b 5.....	Chemistry	1
General Botany, a 2, b 3.....	Botany	1
Anatomical Methods, a 3, b 2.....	Zoology	4
Pharmacy Latin, a 5.....	Pharmacy	1

## Second Semester—

Elementary Chemistry, a & b 5.....	Chemistry	2
General Botany, a 2, b 3.....	Botany	2

---

Anatomical Methods and Physiology, a 3, b 2.....	Zoology	5
Pharmacognosy, a & b 5.....	Botany	5

## SECOND YEAR.

## First Semester—

Materia Medica, a 5.....	Pharmacy	2
Pharmacy, a 5.....	Pharmacy	4
Quantitative Chemistry, a & b 5.....	Chemistry	3
Pharmacy Laboratory, b 3.....	Pharmacy	5
Pharmaceutical Arithmetic, a 2.....	Pharmacy	6

## Second Semester—

Materia Medica, a 5.....	Pharmacy	3
Pharmacy, a 5.....	Pharmacy	7
Volumetric Analysis and Drug Assaying, a & b 5.....	Pharmacy	9
Pharmacy Laboratory, b 5.....	Pharmacy	8

## DEPARTMENTS AND WORK

### The Agricultural Experiment Station

JAMES W. WILSON.

Under the provisions of the Hatch Act of March 2, 1887, and the Adams Act of March 20, 1906, the state receives during the fiscal year of 1907-08 \$24,000 from the treasury of the United States for the maintenance of an experiment station. By an act of the legislature this institution was made a part of the South Dakota Agricultural College. Its object is to conduct investigations along agricultural lines, publish the results in bulletin form and distribute them to the residents of the state for their information and benefit. It consists of five divisions, namely, agriculture, horticulture, chemistry, botany and entomology, and veterinary.

Each of these divisions is in charge of an expert who is also the professor of the same subject in the college.

About sixty acres of the college farm are set aside for experiments in crop rotations and testing varieties of grains.

Another sixty acres are utilized for experiments along horticultural lines, where trees, shrubs and vines are grown in profusion. Co-operation with the United States Department of Agriculture in the adaptation of grains, grasses, forage plants, fruits, trees, shrubs and vegetables for the Northwest is being carried on, and as a result many valuable varieties have been introduced which probably would not otherwise have reached us.

Each division is provided with the proper facilities, by the state, to conduct investigations, and at least four bulletins are published annually, which are free to the residents of the state. Queries pertaining to the various agricultural interests are answered promptly. The regular bulletin mailing list of the station numbers over 12,000 names.

In addition to the above, the state legislature of 1907 appropriated ten thousand dollars for the Forage Testing Station at Highmore, which institution is a sub-station of this experiment station. Eight thousand dollars of this money is to be used for the erection of buildings and two thousand for maintenance. The legislature also passed a law for the establishment

of three other sub-stations in the western part of the state and set aside the revenue derived from 25,000 acres of land in the state for the maintenance of such sub-stations.

All communications to this department should be addressed to the Director.

---

### Department of Agriculture

PROFESSOR WILSON, PROFESSOR WILLIS.

This department includes the farm and animal husbandry divisions.

The instruction given in each division is made as practical as possible, to fit the student better for solving the every day problem of farm life. New grains and forage crops are grown under field conditions and are used in feeding experiments for the economical production of beef, mutton, pork and dairy products.

The College flocks and herds include representatives of fifteen of the leading breeds of domestic animals. Practical work is given daily in score card practice to enable the student to distinguish between the poor and the good, and the good and the fancy kinds of animals, an acquirement necessary for the successful handling of live stock.

The following work is offered:

- 1 Stock Judging. Four recitations per week, first semester; required in the freshman year of the Agriculture Course.  
Instruction in selecting animals for breeding purposes, detection of unsoundness and blemishes, proper conformation, and the use of the score card.  
Text: Craig's "Judging Live Stock."
- 2 Breeds of Live Stock and Stock Breeding. Four lectures and recitations per week, second semester; required in the freshman year of the Agriculture Course; pre-requisite, Agriculture 1.  
Study of the various breeds, their origination, characteristics, improvement, adaptability to different climates, and the best kind for special purposes.  
Text: Plumb's "Types and Breeds of Farm Animals," with lectures.
- 3 Stock Judging. Two recitations per week, first semester; required in the junior year of the animal husbandry group, Agriculture Course; prerequisite, Agriculture 2.



---

A continuation of Agriculture 1. Particular attention is given to show-yard work. Lectures and notes.

- 4 Soils. Five lecture and laboratory periods per week, first semester; required in the junior year of the agronomy group, in the senior year of the horticulture group, Agriculture Course; prerequisite, Physics 3.

The origin and formation of soils, physical properties of the soil, supply of food to the growing plant, soil moisture, soil temperature, tillage, nutrition, wells and irrigation; mechanical analysis of soils; organic matter, moisture and specific gravity demonstrations; capillarity and water holding capacity of various soils; measure of the flow of water and the passage of air through soils; the effect of mulching and tillage upon the conservation of moisture.

Text: Hilgard's "Soils," with references.

- 5 Soils. Five lecture and laboratory periods per week, second semester; required in the junior year of the agronomy group, in the senior year of the horticulture group, Agriculture Course.

A continuation of Agriculture 4. Taking up chemistry of soils and a study of soils in relation to their natural vegetation.

- 6 Farm Crops. Five lecture and laboratory periods per week, second semester; required in the junior year of the horticulture, the dairy and the agronomy groups, Agriculture Course.

The classification, improvement, culture, harvesting, uses, history and geographical distribution of crops; laboratory work in grain grading, cleaning, treating and corn judging. This is a general survey of all farm crops and is taken by all agricultural students.

Text: Hunt's "Cereals in America."

- 7 Stock Feeding. Two recitations per week, first semester; required in the senior year of the animal husbandry, the agronomy and the dairy groups, Agriculture Course; prerequisite, Agriculture 2.

Laws of nutrition, expenditure of energy, balanced rations, composition of feeding stuffs; a comparison of the results of feeding experiments at the various stations, finishing for the market and the economical handling of live stock under South Dakota conditions.

Text: W. A. Henry's "Feeds and Feeding;" with references.

- 8 Stock Feeding. Three recitations per week, second semester; required in the senior year of the animal husbandry and the dairy groups, Agriculture Course.

Continuation of Agriculture 7.

- 9 Farm Crops. One recitation per week, first semester; required in the senior year of the agronomy group, Agriculture Course; prerequisite, Agriculture 5 and 6.

This course will be suited to the needs of the class.

- 
- 10 Farm Crops. Three recitations per week, second semester; required in the senior year of the agronomy group, Agriculture Course. Advanced work for students specializing in agronomy.
- 11 Farm Mechanics. Two recitations per week, second semester required in the senior year of the agronomy, the animal husbandry and the horticulture groups, Agriculture Course; prerequisite, Agriculture 4 and Physics 3. Principles of draft, roads, farm motors, horse power, engines, wind-mills, farm machinery, friction pumps; laboratory work with models and apparatus for measuring draft, examination and tests of farm machinery and implements. Text: King's "Physics of Agriculture," with Lectures.
- 12 Farm Management. Three recitations per week, second semester; required in the senior year of the animal husbandry and the agronomy groups, Agriculture Course. The selection, laying out and general management of farms, farm buildings, selection and rotation of crops, markets; general summing up and correlation of the work in agronomy. The text-book work will be supplemented with lectures and references.
- 

### Dairy Husbandry Department

PROFESSOR LARSEN.

This department offers three separate courses: (1) the Four Years' Agricultural College Course, the last one and a half years of which are devoted chiefly to special dairy studies; (2) the One Year's Dairy Course and (3) the Two Weeks' Winter Course.

The first course has been outlined with a view of fitting young men to become teachers and investigators of dairying in public schools, agricultural colleges and experiment stations, inspectors of creameries and dairy products in municipal, state and government service, and superintendents of large creameries and dairy farms.

The second course is given with a view of training men to become practical, successful operators of creameries, cheese-factories, central plants and dairy farms.

The third, or Two Weeks' Winter Course, is given to fulfill demands of experienced creamery men who can not leave their work to attend a longer dairy course. The course aims to keep the practical men in touch with new ideas and principles, and

to emphasize only such phases of the work as the students demand. Considerable latitude in the work is allowed students taking this course.

The demand for good men properly trained along dairy lines is great. Compensation for dairy work is good. Worthy students can depend upon the cooperation of this department in securing suitable work.

The dairy husbandry department operates on a commercial basis a well equipped creamery and cheese-factory. It is a two-story brick building. The first floor is occupied with the various creamery machinery and cheese-making equipments. On the second floor the milk inspection laboratory, class-rooms and offices are located.

The dairy herd, consisting of representatives of the principal dairy breeds, which is kept in a separate dairy barn, affords excellent facilities for studying the various phases of milk production.

Experiments relating to the feeding, breeding and care of dairy stock and the manufacture of dairy products are in progress at all times. Students may have the advantage of keeping in touch with these experiments; note manners of outlining and executing investigational work and profit from results. Advanced worthy dairy students may arrange to assist in some of this work.

The following work is offered:

For the description of the one year's and the two weeks' courses, see the short industrial courses.

- 1 Farm Dairying. Two lectures and one laboratory period per week, first semester; required in the junior year of the dairy group, in the senior year of the animal husbandry group, Agriculture Course.

A study of the production, secretion, physical and chemical properties of milk; of the uses of milk; of the comparative economy in disposing of and utilizing milk for various purposes of the farm, of testing milk for fat, acid and common adulterations; of the effects of germs and degree of purity on dairy products; of the separating and handling of milk and cream and the manufacture of butter and cheese of the farm.

- 2 Inspection and Testing of Dairy Products. Two lectures and one

laboratory period per week, second semester; required of the same class as Dairy 1.

Students taking this course should have had at least one term's work in chemistry. The course embodies a thorough study of the Babcock test for fat, of the tests for determining acidity of dairy products, of the influence and detection of different preservatives and adulterations and a study of the various pure food standards.

- 3 Dairy Bacteriology. Two lectures and one laboratory period per week, second semester; required in the junior year of the dairy group, Agriculture Course.

In this course bacteriological principles as related to dairying are taught. Function of germs and control of their development in dairy processes are emphasized. General bacteriology is recommended as a prerequisite study.

4. Operation of Creameries and Cheese-factories. Three lectures and two laboratory periods per week, second semester; required in the senior year of the dairy group, Agriculture Course; prerequisite, Dairy 2.

A thorough study of the receiving, sampling and separation of milk, the preparation and use of starters, ripening of cream, principles of churning, salting, working, packing and marketing butter; a study of milk as applied to cheese-making; the manufacture of soft and hard cheese, such as the principles involved in the setting, cutting, heating, milling, salting, pressing, curing and marketing of cheese.

Attention will also be given to the organization, location, construction, drainage and ventilation of creameries and cheese-factories; the economic disposal of factory by-products and various methods of factory refrigeration.

- 5 Dairy Technology. Two lectures per week, first semester; required in the senior year of the dairy group, Agriculture Course; prerequisite, Chemistry 2 and Dairy 3.

This course treats of the ways in which milk and its products are utilized outside of the scope ordinarily considered under dairying. It embraces such subjects as value of milk as a food, the preparation of certified, modified, standardized, fermented and condensed milk; the manufacture of casein, milk ivory, milk sugar, renovated butter and oleomargarine.

- 6 Dairy Farm Management. Two lectures and one laboratory period per week, second semester; required in the senior year of the dairy group, Agriculture Course.

The judging of dairy stock and the various methods of improving and upbuilding a dairy herd will be emphasized in this course; methods of weighing, testing and recording milk produced by each



cow will be outlined. The history, adaptability of various dairy breeds to different conditions and relation of dairy types to milk producing capacity will be studied. This course will also embody a study of the extent to which dairy farming is practiced and under which conditions it is best applicable; of dairy farming as an independent business and as an adjunct to general farming; and the arrangement and construction of dairy farm buildings, stalls, yards, etc.

- 7 Dairy Research. Three recitations per week, second semester; required in the senior year of the dairy group, Agriculture Course. A study of various views held by different authorities on certain important dairy subjects; a digest of recent dairy work of the experiment stations and of comparative dairying as practiced in leading dairy countries; a reading knowledge of German is recommended.

8 Dairy Practice. Elective.

The college has a practical creamery and cheese-factory in operation every day during the year except Sundays. Students who specialize in dairying and need practical experience should make it a point to take this course. Arrangements can be made to do this practical creamery work at almost any time during the day. Vacation time is recommended.

---

### **Department of Horticulture and Forestry**

PROFESSOR HANSEN, MR. STOLTENBERG.

In this department the work is given from two standpoints. In one, especially in the study of genetics, emphasis is placed upon the general philosophy of the subject as being essential to a general education. The claim is made that some of the principles of horticulture and forestry are essential to any well rounded education and to the best preparation for citizenship. The second standpoint is that of students intending to make a life work of horticulture or forestry, either as a business or a profession. Throughout the course full use is made of the student's attainments in the various sciences underlying these subjects. The variation of plants and the principles and methods of their development under the hand of man are considered, as well as their propagation and cultivation.

Field and laboratory exercises emphasize the lectures and recitations of the class room. The habit of independent investi-

gation and close observation is encouraged by requiring written reports of outdoor excursions or demonstrations. Excellent facilities for practical illustration are afforded by the ninety acres of experiment station horticultural grounds and college campus. In this domain are included orchards, forestry plantations, nurseries, vegetable gardens, small fruit plantations, flower borders and a collection of ornamental plants. Special attention is paid to the breeding of hardy fruits adapted to prairie conditions and the work in this line is now second to none in extent. The department greenhouse consists of two sections, one for general floriculture work and the other for fruit-breeding experiments. In addition, the horticultural buildings contain class rooms, laboratory, grafting and potting rooms and storage cellars.

The commercial nursery course is intended as a short winter course for those who desire to engage in the business of growing plants and trees for sale, especially those adapted to prairie conditions.

Special stress is laid upon practical work in the grafting room. No examination is required for entrance to this short course.

The following work is offered:

- 1 Pomology. Two lectures per week, first semester; required in the junior year of the horticulture group, Agriculture Course. Principles of fruit culture with special reference to prairie conditions; exercises in the identification and description of fruits with methods of cultivation and propagation.

Texts: "American Horticultural Manual," Bailey's "Principles of Fruit Culture."

- 2 Genetics. Two recitations per week, second semester; required in the sophomore year of the Agriculture Course, elective in the junior year of the General Scientific Course.

This subject is especially recommended to students of the sciences relating to plants and animals, and also to students of general history and sociology. The evolution of plants and animals under the hand of man and in the state of nature; the philosophy of artificial evolution or the modification and amelioration of plants and animals by environment, selection and hybridization; the relation of genetics to sociology; recent theories and work in plant-breeding.

Texts: Darwin's "Animals and Plants under Domestication;" De Vries' "Species and Varieties, their Origin by Mutation;" Bailey's "Plant-Breeding and Survival of the Unlike;" "Reports of Interna-

tional Conferences on Genetics;" "Reports of the U. S. Department of Agriculture."

- 3 Floriculture and Market Gardening. Two recitations per week, second semester; required in the junior year of the horticulture group, Agriculture Course.

The commercial and amateur cultivation of flowers and vegetables under glass and in the open air; lectures, demonstrations and textbook work.

- 4 Forestry. Three recitations per week, second semester; required in the senior year of the animal husbandry group, Agriculture Course.

Principles of forestry, the influence of forests on climate; timber planting on the prairies; European forestry methods as modified by prairie conditions; shelter belts; the propagation, cultivation, characteristics and use of forest trees; lectures and demonstrations.

Texts: Pinchot's "Primer of Forestry;" Green's "Forestry in Minnesota;" "Proceedings of the American Forest Congress."

- 5 Landscape Gardening. One recitation, and one laboratory period per week, second semester, required in the senior year of the horticulture group, Agriculture Course.

The philosophy of the Beautiful in its various modes of expression; gardening as one of the fine arts; historic development of the ancient or geometric and the modern or natural styles; the best ornamental trees, shrubs, plants and hedges. Special attention is paid to the development of originality in the planning and laying out of country and city home grounds, parks and school grounds; lectures; text-books, and references.

- 6 Floriculture and Home Gardening.

Instruction in home gardening for the students in the short winter course in domestic economy and agriculture; text-books; practical demonstrations and exercises.

- 7 Nursery Handicraft.

Practical exercises in tree, shrub and plant propagation for students in the short commercial nursery course.

---

### Department of Veterinary Medicine

DR. MOORE.

This department occupies a separate two-story building with a hospital in connection. The operating room is equipped with all necessary supplies and instruments for ordinary surgical opera-

tions. Free clinics are held each Saturday at which students assist and perform operations under the direction of the instructor. The instruction offered is aimed to meet the requirements of the agricultural student as well as the special student in veterinary medicine. By a judicious selection of courses in this and other departments the equivalent of the first year's work of the veterinary colleges may be secured.

The following work is offered:

1-2 Veterinary Anatomy. Five recitation and laboratory periods per week, first and second semesters; required in the junior year of the veterinary group, Agriculture Course.

Conducted by the laboratory method with frequent quizzes. Osteology and arthrology.

3-4 Veterinary Anatomy. Five recitation and laboratory periods per week, first and second semesters; required in the senior year of the veterinary group, Agriculture Course.

Splanchnology and myology. A continuation of the preceding.

Text: Chauveau's "Comparative Anatomy of the Domesticated Animals."

5 Horseshoeing and Lameness. Two recitations per week, second semester; required in the junior year of the animal husbandry and the veterinary groups, Agriculture Course.

The anatomy of the foot, its care, preparation, and shoeing; diseases of the organs of locomotion.

6 Veterinary Medicine. Five recitations and laboratory periods per week, first semester; required in the senior year of the animal husbandry, the dairy and the veterinary groups, Agriculture Course. The work will consist of lectures and clinics.

7 Veterinary Medicine. Five recitation and laboratory periods per week, second semester; required in the senior year of the animal husbandry and the veterinary groups, Agriculture Course.

8 Bacteriology. Five recitation and laboratory periods per week first semester; required in the Home Economics Course, and the dairy group, Agriculture Course, junior year; also in the senior year of the Pharmacy Course; elective in the senior year of the General Science Course.

This subject is designed especially to acquaint the student with laboratory methods and technique.

Veterinary Physiology. See Department of Zoology, Zoology 2 and 3.



---

**Department of Home Economics and Domestic Art**

MISS WILCOX, MISS FROMME.

The work in this department is developed along two lines, home economics and domestic art.

Home economics includes the courses which have to do especially with the scientific study of the activities of the home.

Domestic art includes the practical courses in cooking and serving.

This department stands for a better appreciation and a wider knowledge of the things that make for better homes. While the work is essentially scientific in character, the course has been planned with due regard to cultural needs. The department is very favorably located, occupying an entire floor, and is well equipped for the various lines of work. Chart and exhibits illustrating the chemical compositions of food are found in the classroom; general reference books and magazines are found in the general library.

- 1 Food and Dietetics. Four recitations and one laboratory period per week, first semester; required in the Home Economics Course, elective in the General Science Course, freshman year; prerequisite, a freshman, or higher, classification.

The nature, nutritive constituents and relative value of foods. Typical processes of food production. Cost of food. Dietaries.

- 2 Clothing and Shelter. Two recitations per week, second semester; elective in the freshman year of the General Science Course; prerequisite, a freshman, or higher, classification.

Study of fabrics; fibres used in making fabrics, their preparation and manufacture; primitive industries, spinning and weaving; use of fabrics in clothing and in the house; development of modern house from primitive conditions; modern household problems of furnishing and equipment.

- 3 Application of Heat to Food. Three recitations and two laboratory periods per week, second semester; required in the junior year of the Home Economics Course, elective to young ladies in the junior year of the General Science Course in place of Physics 4; prerequisite, Botany 2, Chemistry 3, Zoology 3 and Home Economics 1.

Food principles; effect of heat; household fuels and their uses; cooking apparatus and the principles of its construction; cooking and serving of typical foods.

- 
- 4 Household Sanitation and General Hygiene. Three recitations per week first semester, required in the senior year of the Home Economics Course; elective, together with Home Economics 7 to young ladies in the junior year of the General Science Course in place of Physics 3; prerequisite, Chemistry 2, Botany 2 and Zoology 2.  
By reference and lectures the following subjects are considered: Situation of a house with regard to soil drainage and general surroundings, plumbing and heating arrangements, water supply, sanitary and unsanitary conditions in house, problems of personal and public hygiene, necessary precautions against spread of disease.
- 5 Home Nursing and Invalid Cookery. Three recitations per week, first semester; required in the senior year of the Home Economics Course; prerequisite, Home Economics 1.  
This course includes a study of diet for the sick, care of the sick in the home and the preparation of food for them. A few lectures are usually given by a physician.
- 6 Home Nursing and Invalid Cookery. Three recitations per week second semester; elective in the freshman year of the General Science Course.  
This work is along the same line as Home Economics 5, only more elementary; prerequisite, Home Economics 1.
- 7 Household Economy. Two recitations per week first semester; required in the senior year of the Home Economics Course, elective, together with Home Economics 4, in place of Physics 3 to young ladies in the junior year of the General Science Course; prerequisite, the work below the junior year.  
The aim of this course is to set forth some of the principles underlying housekeeping, including the organization of the household, chemistry of cleaning, laundry work, serving of foods and marketing.
- 8 Teaching of Home Economics. Two recitations per week, second semester; elective in the senior year of the Home Economics Course; prerequisite, Philosophy 1 and 3.  
Purpose and method of work; a consideration of courses of study, school equipment; the relation of this subject to other studies and to the school as a whole.
- 9 Original Investigation. Two laboratory periods per week, second semester; required in the senior year of the Home Economics Course; prerequisite, Botany 2, Chemistry 4, Zoology 3, Bacteriology, and Home Economics 1 and 6.  
Laboratory work. Individual problems assigned for investigation.

### Domestic Art

For description of Domestic Art 1 and 2, see the preparatory department.

- 3 Sewing. Three laboratory periods per week, second semester; required in the freshman year of the Home Economics Course. Plain dressmaking, drafting, cutting, fitting and general dressmaking. Each student is required to make a shirt-waist suit. Students who have had this work or its equivalent may take a course in art needlework instead. The course will be fitted, as much as possible, to the needs of the individual student.
- 

### Department of Mechanical Engineering

PROFESSOR SOLBERG, MR. COOK.

The object of the work offered is to give the students a thorough training in the theoretical principles underlying the science of mechanics and machines and at the same time to enable them to become practically familiar with some of the numerous applications of these principles which are of such inestimable value to the human race.

The instruction is both theoretical and practical. The usual methods of text-book study and lectures are employed, but the student is required to put into practice, as far as possible, the instruction which he receives. Hence the work of the class-room is supplemented and practically exemplified by practice in shops. The student not only studies the theories of constructing and operating machinery, but in the drawing room he designs, and in the shops constructs and operates such machines. It is believed that those who complete this course will be able to fill responsible positions in manufacturing establishments. It is important that French be elected as the language that is required in addition to English.

The department is located in the Engineering Building. The workshops are supplied with a large variety and quantity of tools. The woodshop is furnished with twenty-five sets of carpenter tools and with eight wood turning and one pattern maker's lathe, a scroll saw, a combination circular saw and a twenty-inch planer. There is also a variety of special tools for wood working.

The machine shop is furnished with a large number of engine lathes of different sizes, a universal milling machine, shaper, planer, tool grinder, drill press, emery wheels and a great variety of hand tools. The machinery is driven by a 50 H. P. Atlas Engine.

The experimental laboratory is equipped with a 100,000-pound Riehle vertical screw testing machine, a 2,000-pound cement testing machine, together with steam, gas and hot-air engines. These machines are all furnished with a large variety of smaller instruments for making complete tests, such as indicators, planimeters, tachometers, extensometers, compressometers, deflectometers, etc., also all the necessary equipment for testing cements and concretes.

Work in architectural drawing and designing is offered. Additional work along this line will be given to students who desire it.

A large number of pictures, drawings, and illustrative material has been recently added to the equipment through the liberality of manufacturers and friends of the college.

The following work is offered:

For description of Mechanical Engineering 1 and 2, see the preparatory department.

- 3 Machine Shop. Three laboratory periods per week, second semester; required in the freshman year of the Mechanical and the Electrical Engineering Courses.  
Manipulation of the various machines in turning, planing, shaping, milling, gear cutting and tool making.
- 4 Machine Shop. Five laboratory periods per week, first semester; required in the sophomore year of the Mechanical and the Electrical Engineering Courses.  
Construction of some machine or appliance from designs made in drawing room.
- 5 Mechanical Drawing. Five laboratory periods per week, first semester; required in the freshman year of the Engineering Courses; elective in the junior year of the General Science Course.  
Instrumental drawing, geometrical problems and parts of machines. This work is offered during the entire year, and at hours convenient to teachers and students.



- 6 Architectural Drawing. Three times per week, first or second semester; elective in the junior year of the General Science Course. Rendered drawings of simple buildings, examples of various orders, giving facility in draughtmanship, familiarizing students with principles.
- 6a Architectural Design. Three times per week, first semester; elective in the senior year of the General Science Course. Principles of planning introduced in practical problems, exercises in composition and details.
- 6b Perspective. Five times per week, first or second semester; elective in the senior year of the General Science Course.
- 7 Descriptive Geometry. One recitation and two laboratory periods per week, second semester; required in the sophomore year of the three Engineering Courses. Instruction in methods of representing by drawing all geometrical magnitudes and solution of problems relating to these magnitudes in space.
- 8 Machine Design. Two laboratory periods per week, second semester; required in the sophomore year of the Mechanical and the Electrical Engineering Courses. Solution of various problems involving the design of simple parts of the machine.  
Text: Klein's "Machine Designs."
- 9 Machine Design. Four laboratory periods per week, first semester; required in the junior year of the Engineering Courses. Continuation of Mechanical Engineering 8.
- 10 Elements of Mechanism. Three recitations per week, first semester; required in the junior year of the Engineering Courses. Elements of machinery, velocity ratios, graphic representation of speed and acceleration; motion transmitting parts, such as gears, belts, cams, screws, link work; automatic feeds, parallel and quick return motions; designing.  
Text: "Wood and Stahl."
- 11 Gas and Oil Engines. Two recitations per week, second semester; required in the junior year of the Mechanical Engineering Course, in the senior year of the Electrical Engineering Course. Study of the theory, design and operation of the different types and cycles of gas and oil engines.  
Text: Hutton's "Gas Engines."
- 12 Steam Engines and Thermodynamics. Five recitations per week, sec-

ond semester; required in the junior year of the Mechanical and the Electrical Engineering Courses, and for the fifth year degree in Civil Engineering.

Study of the modern steam engine, slide valve, and when in combination with independent cut-off valves, link motion and Zeuner diagrams, reciprocating parts and indicator practice; the principles of the theory of heat which are necessary to a study of the various kinds of heat engines; the application of the laws of thermodynamics to the steam engine and a study of steam engine economy by entropy temperature analysis and by other graphical methods.

Text: Ripper's "Steam Engine."

- 13 Steam Boilers. Two recitations per week, first semester; required in the senior year of the Mechanical and the Electrical Engineering Courses.

Advantages and disadvantages of using the various forms of boilers, methods in construction, tubes and flues, plates, riveting, bracing, grate and heating surface, gauges and feed appliances, setting, care and operation.

Text: Peabody's "Steam Boilers."

- 14 Kinematics. Two laboratory periods per week, second semester; required for the fifth year degree in the Mechanical and the Civil Engineering Courses.

Geometry of machinery, problems in the design of motion transmitting appliances.

- 15 Strains in Framed Structures. Three recitations per week, second semester; required in the senior year of the Mechanical and the Civil Engineering Courses.

Graphical determination of stresses under action of static, moving and wind forces.

Text: "Green," Vol. 1.

- 16 Mechanics of Materials. Three recitations per week, second semester; required in the junior year of the Engineering Courses.

Study of the strength and elastic properties of materials of construction, and elementary stresses of deformation in tension, compression, shearing, torsion and flexure and mechanics of beams, columns and shafts.

Text: Merriman's "Mechanics of Materials."

- 17 Experimental Engineering. Two laboratory periods per week, first semester; required in the senior year of the Engineering Courses.

Here each student is required to carry out a definite series of tests of the various materials of construction, such as timber, cast iron, wrought iron, steel, cements and concretes. He is also required to

make complete tests of efficiencies of gas engines, hot air engines, steam engines and boilers, etc.

- 18 Experimental Engineering. Two laboratory periods per week, second semester; required in the senior year of the Engineering Courses.

Continuation of Mechanical Engineering 17.

- 19 Engineering Design. Five laboratory periods per week, first semester; required in the senior year of the Mechanical Engineering Course.

Solution in the drawing room of some practical problems in design and making working drawings of same.

- 20 Engineering Design. Three laboratory periods per week, second semester; required in the senior year of the Mechanical Engineering Course.

Continuation of Mechanical Engineering 19.

- 21 Structural Design. Three laboratory periods per week, first semester; required for the fifth year degree in Mechanical Engineering. Designing of roofs and buildings for power stations. For students in mechanical and electrical engineering.

- 22 Structural Engineering. Two laboratory periods per week, second semester; required for the fifth year degree in Mechanical Engineering.

Continuation of Mechanical Engineering 21, with special reference to results obtained from Mechanical Engineering 18.

- 23 Power Transmission and Measurement. Two recitations per week, first semester; required in the senior year of the Mechanical Engineering Course; also for the fifth year degree in Electrical Engineering.

This work includes a study of the methods employed for transmission and measurement of power in machine shops and factories, and a review of experiments which have been made to determine the efficiency of the various systems of power transmission. Attention is also given to the design of transmission machinery, and to the design and arrangement of the equipment in power plants.

- 24 Statics. Two recitations per week, first semester; required for the fifth year degree in Mechanical Engineering.

Treated with special reference to the requirements of engineers. Resolution and composition of forces; center of gravity; principles of equilibrium with numerous applications. Graphic as well as algebraic methods are used. The various hurtful resistances to friction are considered, and numerous problems worked out in the drawing room.

25 Heating and Ventilation. Two recitations per week, second semester; required for the fifth year degree in Mechanical Engineering. A study of the principles underlying the design of the various systems of heating and ventilation in common use, including such details as loss of heat from buildings, problems in proportioning ventilating ducts; and the arrangement of systems of piping for steam and hot water. A study is also made of the various mechanical details entering into the installation of private plants and also plants operated from central stations.

26-27 Thesis Work. Two and three hours per week, first and second semesters; required for the fifth year degree in Mechanical Engineering.

At the beginning of the fifth year's work a subject is assigned to each student, which he is to investigate, and on which he is required to prepare a thesis. This work may involve original design, or it may involve an experimental investigation of the action of certain machines or appliances or of phenomena developed by the action of certain mechanical forces. In the pursuit of this work the student is thrown largely on his own responsibility. He is expected to familiarize himself with the literature on the subject and to study thoroughly the methods involved in the subject selected. The subject chosen should be submitted to the professor in charge not later than November first of the current year.

---

### Department of Electrical Engineering.

PROFESSOR MATHEWS, MR. HOY.

The aim of the work offered in electrical engineering is to impart to the student a practical knowledge of the principles of this branch of engineering. Recognized as it is as one of the most important engineering subjects, a well equipped laboratory is provided for the use of the student to supplement the lecture and recitation work of the class room. The laboratory equipment consists of generators and motors of both the direct and alternating types, transformers, and measuring instruments of different types and classes for the recording and measuring of current and pressure, a sixty-cell storage battery used in connection with the work in photometry, various types of lamps, arc and incandescent, lamp banks, rheostats, and other apparatus used in connection with testing.

The following work is offered:



- 1 Electricity and Magnetism. Three recitations and one laboratory period per week, first semester; required in the junior year of the Courses in Electrical and Mechanical Engineering, and in the senior year of the Course in Civil Engineering; prerequisite, Mathematics 7, 8 and 9, Physics 4.

This subject embraces a study of the theory and principles of static and current electricity, magnetism and the magnetic circuit, electro-magnetic induction and laws of the electric circuit, primary batteries, principles of telegraphy and the telephone.

- 2 Telephone Engineering. Two recitations per week, first semester; required in the junior year of the Electrical Engineering Course; prerequisite, Mathematics 7, 8, and 9, Physics 4, Electrical Engineering 1.

A study of the theory and principle of the telephone, study of parts and construction of different types, switchboards, and auxiliary apparatus, lines and line construction.

- 3 Dynamo Electric Machinery. Three recitations and two laboratory periods per week, second semester; required in the junior year of the Courses in Mechanical and Electrical Engineering, and for the fifth year degree in Civil Engineering; prerequisite, Mathematics 11, Physics 4, and Electrical Engineering 1.

Theory of the magnetic circuit, magnetic induction in iron, principles underlying the design, construction and operation of direct current generators and motors. Resistance and insulation tests, experimental study of the operation and behavior of different types of motors and generators, efficiency tests.

- 4 Alternating Currents. Three recitations and two laboratory periods per week, first semester; required in the senior year of the Electrical Engineering Course, also for the fifth year degree in Mechanical Engineering; prerequisite, Mathematics 11, Physics 4, and Electrical Engineering 1 and 3.

Study of the flow of alternating currents, inductance, capacity, principles of construction of alternating current generators and motors, transformers; measurement of inductance and capacity, wave form of pressure and current, efficiency tests of machines and transformers.

- 5 Dynamo Design. Three laboratory periods per week, first semester; required in the senior year of the Course in Electrical Engineering; prerequisite, Mathematics 11, Physics 4 and Electrical Engineering 1 and 3.

In this the student works out and completes a full set of drawings of a shunt or compound wound type of direct current generator of small size. The object of the course is to teach the theory of

design of machines and to familiarize the student with the details and parts of the machine in relation to each other and to the machine as a whole.

- 6 Electric Light and Power Distribution. Three recitations and two laboratory periods per week, second semester; required in the senior year of the Electrical Engineering Course; prerequisite, Mathematics 11, Physics 4 and Electrical Engineering 4.

A study of transmission lines, resistance and inductance effects in line circuits, kinds of apparatus used in the generating station and in the receiving station, arc and incandescent lamps, special forms of lamps, indicating and recording instruments, laboratory work along the lines of lamp testing and the calibration of instruments.

- 7 Polyphase Currents. Three recitations and two laboratory periods per week, first semester; required for the fifth year degree in Electrical Engineering; prerequisite, all the work required for the Bachelor's degree in this department.

A study of polyphase currents, machines, transmission systems and measuring apparatus; experimental work in connection with polyphase currents.

- 8 Electrical Design. Three laboratory periods per week, first semester; required for the fifth year degree in Electrical Engineering; prerequisite; all the work required for the Bachelor's degree in this department.

A study of the design of lifting magnets, clutches and transformers, and of the principles involved in the construction of the apparatus mentioned above.

- 9 Design of Power Stations. Three recitations and two laboratory periods per week, second semester; required for the fifth year degree in Electrical Engineering; prerequisite, Electrical Engineering 7 and 8.

A study of different types of stations, arrangement of boilers, engines, machines, switchboards and electrical apparatus, location of station with respect to distributing system. A station design is worked out by the student and drawings of plans made.

- 10 Installation and Testing of Power Plants. Two recitations and one laboratory period per week, second semester; required for the fifth year degree in Electrical Engineering; prerequisite, Electrical Engineering 7 and 8.

A study of foundation construction and setting of machines, number and division of relative to the capacity of the plant, building of switchboards, efficiency and operation tests of plants, etc.

- 11-12 Thesis. Two or three hours per week, first and second semesters.

A complete investigation of some electrical subject or apparatus or the design of a machine or other electrical appliance, containing when possible the results of personal and independent observation. The subject must be selected early in the year (not later than November first,) and reports submitted from time to time concerning the progress of the work to the professor in charge.

### Department of Civil Engineering.

PROFESSOR DERR.

The course in civil engineering is designed to impart to students general and technical knowledge, so that, equipped with their theoretical education and as much of engineering practice as can well be acquired in college, they may develop into successful practitioners.

It is aimed to give as thorough a preparation as time will permit in the following subjects: the surveying of land, location and construction of roads, railroads, canals and water works; the construction of foundations in water and on land, and of superstructures and tunnels; the application of mechanics, graphical statics, and descriptive geometry to the construction of various kinds of arches, trusses, roofs, and bridges; the sewerage of towns, and the irrigation and reclaiming of land; the preparation of detail drawings, and the plans and specifications; the laws of construction as related to contracts, bids and bidders; political economy for the purpose of making clear the economic value of the civil engineer as a director of industrial enterprises.

- 1 Surveying. Five periods of recitations and field work per week, second semester; required in the freshman year of the Civil Engineering Course; prerequisite, Mathematics 9.  
General principles and fundamental operations; instruments; the declination of the magnetic needle; laying out, parting off and dividing up land; United States land surveys.  
Text: Tracy's "Plane Surveying."
- 2 Surveying. Two periods of recitation and field work per week, second semester; required in the Courses in Agriculture, Mechanical Engineering and Electrical Engineering, elective in the General Science Course, freshman year.  
An abridged course for other students in engineering and agriculture, along the lines of Civil Engineering 1.

- 
- 3 Surveying. Five periods of recitations and field work per week, first semester; required in the sophomore year of the Civil Engineering Course.  
A continuation of Civil Engineering 1. Leveling, higher surveying; adjustments of instruments; topographic and exploratory surveying; plans and tachymetric surveying.
- 4 Topographical Surveying. Two periods of recitations and field work per week, second semester; required in the sophomore year of the Civil Engineering Course; prerequisite, Civil Engineering 1.  
Triangulation, precise leveling. Transit stadia lines, connecting with triangulation stations, form the basis for the topography, and plane-table practice is given in filling in the details. Maps are plotted to scale from the co-ordinates of the stadia lines, adjusted to the triangulation, and contours are drawn. Recitations, field work, computations and drawings.  
Text: Wilson's "Irrigation Engineering."
- 5 Hydraulics. Three recitations per week, first semester; required in the junior year of the Civil Engineering Course, in the senior year of the Courses in Mechanical and Electrical Engineering; prerequisite, Mathematics 11.  
Hydrostatics and theoretical hydraulics; study of flow through orifices, tubes, pipes, over weirs, in conduits, canals and rivers; applications in engineering, water power plants and developments.  
Text: Merriam's "Hydraulics."
- 6 Geodesy. Three periods of recitations and field work per week, second semester; required in the junior year of the Civil Engineering Course; prerequisite, Mathematics 11 and Civil Engineering 1.  
Construction and use of instruments with reference to the elimination of instrumental errors; precise leveling; methods of sounding; development of the method of least squares, with application to survey problems and to the adjustment of a triangulation.  
Text: Crandall's "Geodesy and Least Squares."
- 7 Water Supply. Two recitations per week, second semester; required in the junior year of the Civil Engineering Course, prerequisite, Civil Engineering 5.  
The design, construction, operation and management of municipal water supply systems.  
Text: Turneure and Russell's "Public Water Supplies."
- 8 Irrigation. Two recitations per week, second semester; required in the junior year of the Civil Engineering Course; prerequisite, Civil Engineering 5.



The principles underlying the design and construction of irrigation works; hydrography, canals, storage reservoirs.

Text: Wilson's "Topographical Surveying."

- 9 Masonry and Foundations. Two recitations per week, second semester; required in the junior year of the Civil Engineering Course, in the senior year of the Courses in Mechanical and Electrical Engineering; prerequisite, Mathematics 11 and 13.  
Building stone, retaining and reservoir walls and dams, arches; mechanics of masonry construction; foundations on land and water; coffer dams, caisson and crib dams; pneumatic caissons.  
Text: Baker's "Masonry and Foundations."
- 10 Sewerage. Two recitations per week, first semester; required in the senior year of the Civil Engineering Course.  
A study of the design, construction and operation of sewer systems, and of the various methods of sewage disposal; water purification.  
Text: Folwell's "Sewerage."
- 11 Roads and Pavements. Two recitations per week, first semester; required in the senior year of the Civil Engineering Course.  
Construction and maintenance of city streets and country roads; study of pavements and paving materials.  
Text: Baker's "Roads and Pavements."
- 12 Contracts and Specifications. Two recitations per week, first semester; required in the senior year of the Engineering Courses.  
Synopsis of the law of contracts as applied to engineering construction; study of typical contracts and specifications; riparian rights, boundary lines, survey descriptions, etc.  
Text: Johnson's "Contracts and Specifications."
- 13 Railroad Engineering. One recitation and two periods of field work per week, second semester; required in the senior year of the Civil Engineering Course, and for the fifth year degree in Mechanical and Electrical Engineering; prerequisite, Civil Engineering 1.  
The field work includes the laying out of curves and the staking out of structures, in addition to making the reconnaissance, preliminary and location surveys for a short line of railway; recitations, lectures, field work and drawing.
- 14 Dam and Reservoir Design. Two periods of field work per week, second semester; required in the senior year of the Civil Engineering Course; prerequisite, Civil Engineering 5, and Mathematics 11 and 13.

The Study of modern hydraulic construction; dams, reservoirs, conduits, levees, etc. Structures relating to water power, canals and irrigation.

- 15 Structural Design. Five periods of recitations and laboratory work per week first semester; required for the fifth year degree in Civil Engineering; prerequisite, Mathematics 11, Mechanical Engineering 6. Computation of stresses in roof and bridge trusses; highway and railway bridges trusses; graphic analysis of simple beams and roof and bridge trusses; center of gravity and moment of inertia. Text: Merriman and Jacoby's "Roofs and Bridges," Parts I and II.

- 16 Structural Design. Three laboratory periods per week, second semester; required for the fifth year degree in Civil Engineering; prerequisite, Civil Engineering 15.

Principles of economic design; design of plate girder bridge, pin bridge, riveted bridge; continuous bridges, draw bridges, cantilever bridges, suspension bridges, arches; building construction.

Text: Merriman and Jacoby's "Roofs and Bridges," Part III.

- 17 Hydraulic Motors. Three recitations per week, first semester; required for the fifth year degree in Civil Engineering; prerequisite, Civil Engineering 5.

A study of reaction turbines and impulse wheels; construction, regulation, testing sources of loss of energy.

Text: Bodmer's "Hydraulic Motors."

- 18 Reinforced Concrete. Three recitations per week, first semester; required for the fifth year degree in Civil Engineering; prerequisite, Mathematics 13, Mechanical Engineering 16.

A study of reinforced concrete construction, including investigation of stresses and the determination of form and proportions; recitations, computations, and drawing.

- 19-20 Thesis. Two and three hours per week, first and second semesters; required for the fifth year degree in Civil Engineering.

The thesis is intended to show the student's ability to apply the fundamental principles acquired in this course, in original investigation or design of some engineering structure, the student working independently and making regular reports showing the progress of the investigation or design to the professor having charge of the subject. The subject and the plan of the work should be submitted to the professor in charge not later than November first of the current year.

---

**Department of English**

PROFESSOR BATES, ASSOCIATE-PROFESSOR POWERS.

The aim of the department is two-fold: to train the student in the effective use of the English language in original composition, and to give him an intelligent appreciation of English literature.

The following courses are offered:

For a description of English 1 to 6, see the preparatory department.

- 7 Rhetoric. Four recitations per week, first semester; required in the freshman year of all the courses; prerequisite, English 6.  
This work is devoted to a practical study of the principles of rhetoric. A text-book is used, and constant written work is required. This receives individual criticism by the instructor, and is freely discussed in class for the purpose of making clear the principles set forth in the text-book. The work is supplemented with reading.
- 8 Rhetoric. Four recitations per week, second semester; required of the same classes as English 7, of which it is a continuation; prerequisite, English 7.  
The four forms of discourse are studied in order, special emphasis being laid on the writing of exposition.
- 9 Chaucer and a Brief History of the English Language. Four recitations per week, first semester; required in the sophomore year of the Courses in Home Economics. General Science and Pharmacy; prerequisite, English 8.
- 10 Elizabethan Drama. Four recitations per week, second semester; required of the same classes as English 9; prerequisite, English 9.
- 11-12 Advanced Rhetoric. Two recitations per week, first and second semesters; required in the junior year of all the courses except the Pharmacy Course; prerequisite, English 8.  
This course consists in writing and in a rhetorical analysis of masterpieces of English prose, in the fields of both science and literature.
- 13 English Literature from 1625 to 1800. Three recitations per week, first semester; elective in the junior year of the General Science Course, and in the senior year of the Home Economics Course; prerequisite, English 8.

---

An historical survey in connection with the reading of classics of this period.

- 14 English Poetry of the Nineteenth Century. Three recitations per week, second semester; elective in the same classes as English 13; prerequisite, English 8.

The first part of this course is devoted chiefly to the great poets of the romantic movement. Later, Browning, Tennyson, and the Pre-Raphaelites are taken up. The poems to be studied are selected from Page's British Poets of the Nineteenth Century.

- 15 English Prose of the Nineteenth Century. Five recitations per week, first semester; elective in the senior year of the General Science Course; prerequisite, English 12.

A study of prose writings representative of the thought and life of this period. The works studied are from Macaulay, Carlyle, Ruskin, and Matthew Arnold.

- 16 English Prose of the Nineteenth Century. Five recitations per week, second semester; elective in the senior year of the General Science Course; prerequisite, English 15.

A continuation of English 15. The works studied are chiefly fiction.

---

### Department of Latin.

PROFESSOR MCCLENON.

The work offered in Latin aims to give the student a sufficient knowledge of the language to enable him to pursue the work in science with success. A knowledge of Latin is also a very valuable aid in the mastery and clear understanding of the English language.

In the first and second years of the preparatory department a choice is given between beginning Latin and elementary science work; and in the freshman and sophomore years of the courses in General Science, Home Economics and Pharmacy the student has an option between Latin and modern languages.

The following work is offered:

For description of Latin 1, 2, 3 and 4, see the preparatory department.

- 5 Latin. Four recitations per week, first semester; elective in the freshman year according to the above requirements.



Cicero, Orations against Cataline, III and IV; Poet Archias.

- 6 Latin Four recitations per week, second semester; Latin 5 continued.  
Virgil, Books I and II, with special attention to scansion, rhetorical figures, and mythological references.
  - 7 Latin. Four recitations per week, first semester; elective in the sophomore year according to the above requirements.  
Virgil, Books III, IV and V.
  - 8 Latin. Four recitations per week, second semester; Latin 7 continued.  
Virgil, Book VI. Livy.
  - 9 Latin. Three recitations per week, first semester; elective in the junior year of the General Science Course, and in the senior year of the Home Economics Course.  
Horace, Odes and Satires.
  - 10 Latin. Three recitations per week, second semester; elective in the same classes as Latin 9.  
Quintilian.
- 

### **Department of Modern Languages.**

PROFESSOR HAYES.

Students who pursue work along scientific, technical or historical lines are virtually compelled to have at least a good reading knowledge of either French or German and in many cases of both.

In the General Science, the Home Economics and the Pharmacy Courses either French, German or Latin, and in the Agriculture Course, either French or German is required during the freshman and the sophomore years. In the Engineering Courses French is required during the sophomore year. Higher work is elective, and the student is strongly advised to take a third year, if possible, of the language chosen.

#### **GERMAN.**

- 1 German. Four times per week, first semester; elective in the freshman year according to the above requirements.  
German grammar, prose, and composition; constant drill in pronun-

ciation, occasional memorizing of selected passages, and practices in speaking German. Reading is begun early. Lange's Method.

- 2 German. Four recitations per week, second semester.  
Continuation of German 1.
- 3 German. Four recitations per week, second semester; elective in the sophomore year according to the above requirements.  
Historical and other prose of the last century; composition and conversation.  
Texts: Joynes-Meissner's "Grammar."
- 4 German. Four recitations per week, second semester.  
Continuation of German 3. In addition there will be extensive reading of scientific German, with Hodge's Course in Scientific German for text-book.
- 5 German. Three recitations per week, first semester; elective in the junior year of the General Science Course, and in the senior year of the Home Economics Course.  
Lessing and Schiller, with a review of German literature up to their time. Themes, Nathan der Weise and Emilia Galotte, Die Jungfrau von Orleans and Wilhelm Tell.
- 6 German. Three recitations per week, second semester; elective in the same classes as German 5, of which it is a continuation.  
Goethe's life and works, Goethe and Schiller; Goethe and Carlyle; influence upon German and English literature. Themes, Faust; selected portions from both parts; Dichtung and Wahrheit or Gotz von Berlichingen.

#### FRENCH.

- 1 French. Four recitations per week, first semester; elective in the freshman year according to the above requirements.  
French grammar, prose, and composition. Thorough drill in pronunciation; reading and practice in speaking begun very early.  
Texts: Fraser and Squair's "Grammar;" "Le Tour de la France par deux Enfants."
- 2 French. Four recitations per week, second semester.  
Continuation of French 1. Dictation exercises, memorizing of selected passages, conversation.  
Text: Super's "Reader."
- 3 French. Four recitations per week, first semester; elective in the sophomore year according to the above requirements.  
Hugo, Balzac, De Musset, and other nineteenth century writers; themes and composition.

- 4 French. Four recitations per week, second semester.  
Continuation of French 3. In addition there will be extensive reading of scientific French, with Luquiens' "Popular Science" for text-book.
- 5 French. Three recitations per week, first semester; elective in the junior year of the General Science Course, and in the senior year of the Home Economics Course.  
Corneille, Racine, La Fontaine; their lives and works; their influence on their contemporaries; the literature and society of their time. Themes.
- 6 French. Three recitations per week, second semester; open to those who have completed French 5.  
Moliere and Voltaire; their lives and writings; their influence on French and English thought; how they were influenced by English writers, particularly Shakespeare. Themes.
- 

### Department of History and Political Science

PROFESSOR HARDING.

The aim of this department is to introduce the student to such studies as may enable him to deal with economic problems and to fulfill his social and political duties; to develop in him the power to use critically and constructively the historical method, and especially to awaken in him an interest in the great field of history and political science and an enthusiasm for personal individual effort. Constant endeavor is made to teach the practical application of the social, political and economic experiences of the race to the problems of modern life.

The text-book is supplemented by lectures and class discussions based upon assigned readings or the original work of students. Students are encouraged in every way to make use of the college library, which is the tool house of this department.

For description of History 1 to 6, see the preparatory department.

- 7 Medieval History. Three hours per week, first semester; required in all the courses leading to the degree of Bachelor of Science, except the Engineering Courses; in the junior year except in the dairy group, where it is offered in the senior year.  
A general survey of the history of Europe from the barbarian

invasions to the close of the fifteenth century. Lectures, text-book, papers, reports and practices in application of the fundamental principles used in testing the value of historical material.  
Text: Robinson's "History of Western Europe."

- 8 Modern History. Three recitations, per week, second semester; required of the same classes as History 7, of which it is a continuation.

Continuation of History 7. History of Europe from the opening of the sixteenth century to the present time.

- 9 American History. Three recitations per week, first semester; elective in the junior year of the General Science Course, and in the senior year of the Home Economics Course.

A study of constitutional and political development from 1783 to 1829. Lectures, library work, reports, and careful study of assigned sources.

Text: Hart's "Formation of the Union."

- 10 American History. Three recitations per week, second semester; elective in the same classes as History 9, of which it is a continuation.

The constitutional and political history of the United States from the beginning of Jackson's administration to the Civil War.

Text: Wilson's "Division and Reunion."

- 11 Political Economy. Three recitations per week, first semester; required in the senior year of all the four year courses except the Pharmacy Course.

A study of the fundamental laws of economic science. Text-book supplemented by lectures on special subjects and assigned readings.

Text: Seager's "Introduction to Economics."

- 12 Sociology. Three recitations per week, second semester; required in the senior year of the Courses in Agriculture, Home Economics and General Science.

The fundamental principles of social science. Blackmar's "Elements of Sociology" will be used as a text-book, supplemented by lectures and assigned readings.

- 13 American Government. Three recitations per week, first semester; elective in the senior year of the General Science Course.

An advanced study of the actual workings of government in the United States, federal, state and local, including suffrage and elections, party machinery and methods, national civil service, extra legal methods of political action, and comparisons with other governments. Lectures, text book, and the preparation of reports upon assigned subjects. Open to juniors and seniors and to other quali-



fied students upon the consent of the instructor.

Texts: Hart's "Actual Government," supplemented by Bryce's "American Commonwealth."

- 14 American Government. Three recitations per week, second semester; elective in the senior year of the General Science Course.

Complement of 13. The following topics will be considered: the territorial functions of government, including land and land holding, boundaries and annexations, territories and colonies; the financial functions, external relations, organization of commerce, transportation, education, religion and public morals, and public order.

---

## Department of Philosophy

PROFESSOR MCCLLENON.

In every business or profession, a knowledge of the laws of the mind is of very great value in the attainment of the highest success. Accordingly, psychology finds a prominent place in nearly every college curriculum.

As character lies at the foundation of all true success, a study of the moral as well as the mental nature is very important. For this reason a course in ethics is also required.

For those who intend to teach a course in pedagogy is offered, including history of education, and methods of teaching. The graduates of the College who have taken this course and have had a year's experience in teaching are entitled to a provisional state certificate, and, after two years of successful experience in teaching, will be entitled to a state certificate.

The following subjects are offered:

- 1 Psychology. Three recitations per week, first semester; required in the junior year of the Courses in Agriculture, Home Economics and General Science.

Discussion of the various phases of mental activity. Special attention is given to the cultivation of mental faculties and will power, and their relation to the study of Pedagogy.

Text: Halleck's "Psychology and Psychic Culture."

- 2 Ethics. Three recitations per week, second semester; required in the senior year of the Courses in Agriculture, Home Economics and General Science.

A study of ethical principles, grounds of governmental authority,

discussions on conduct of individuals and nations.

Text: Hopkins.

- 3 History of Education. Three recitations per week, first semester; elective in the senior year of the Courses in Home Economics and General Science.

1. The Oriental Nations.

2. The ancient classical nations.

3. Christian education before the Reformation.

4. Education from the Reformation to the present.

Text: Painter's "History of Education."

- 4 Methods of Teaching. Three recitations per week, second semester; elective in the senior year of the Courses in Home Economics and General Science.

Special attention to child study, school organization, and school management. White's text-books will be used as a basis for the work given.

---

### Department of Mathematics and Astronomy

PROFESSOR BROWN, MR. NELSON.

The general work of this department is planned to cultivate habits of systematic and accurate thinking, as well as facility in making calculations. Independent effort is encouraged to the greatest possible extent, the solutions of problems and original demonstrations forming an important part of each course.

The class work in general astronomy is supplemented by the use of instruments in the observatory. These include a six-inch equatorial telescope, a transit instrument, a sidereal clock and a chronograph.

For description of Mathematics 1 to 6, see the preparatory department.

- 7 Solid Geometry. Three recitations per week, first semester; required in the Courses in Pharmacy and Engineering; elective in the General Science Course, freshman year; prerequisite, Mathematics 6.

All the important principles of the subject will be covered.

Text: Sanders' "Plane and Solid Geometry."

- 8 Advanced Algebra. Three recitations per week, second semester; required in the Courses in Pharmacy and Engineering, elective in

the General Science Course, freshman year; prerequisite, Mathematics 4.

Graphs, permutations and combinations, complex numbers, elementary theory of equations, determinants, partial fractions.

Text: Hawkes' "Advanced Algebra."

- 9 Plane Trigonometry. Two recitations per week, second semester; required in the freshman year of the Courses in Pharmacy, Agriculture and Engineering; elective in the freshman year of the General Science Course, freshman year; prerequisite, Mathematics 6. The elementary notions of trigonometry; solutions of plane triangles.
- 10 Plane and Spherical Trigonometry. Two recitations per week, first semester; required in the Engineering Courses, elective in the General Science Course, sophomore year; prerequisite, Mathematics 8 and 9.
- 11 Analytic Geometry and Calculus. Five recitations per week, first semester; required in the Engineering Courses, elective in the General Science Course, sophomore year; prerequisite, Mathematics 8 and 9.  
The greater part of the semester will be devoted to analytic geometry.
- 12 Calculus. Five recitations per week, second semester; required in the sophomore year of the Engineering Courses, elective in the junior year of the General Science Course; prerequisite, Mathematics 11. Continuation of Mathematics 11.
- 13 Analytic Mechanics. Five recitations per week, first semester; required in the junior year of the Engineering Courses, elective in the senior year of the General Science Course; prerequisite, Mathematics 12.  
The applications of analytic geometry and calculus to the solutions of mechanical problems.
- 14 Analytic Mechanics. Five recitations per week, second semester; elective in the senior year of the General Science Course.  
Continuation of 13.
- 15 General Astronomy. Four recitations per week, second semester; required in the senior year of the Courses in General Science, Home Economics and Engineering; prerequisite, Mathematics 6.  
The text will be covered and frequent use made of the instruments.  
Text: Young's "Manual of Astronomy."

---

### Department of Physics

PROFESSOR MATHEWS, MR. HOY.

The various subjects offered by this department are designed for three classes of students.

First—Those desiring a scientific training where physics is necessary as a foundation subject.

Second—Those expecting to gain some knowledge of the principles of physics and to fit themselves as teachers of science in our high schools.

Third—Those wishing to make physics their major subject.

From the fact that physics is one of the foundation sciences and that a knowledge of its laws is necessary to every student seeking a scientific training, the department has been well fitted with rooms and appliances to provide this training. Its lecture rooms are well provided with arm-rest chairs. The laboratories are well lighted and provided with non-vibratory piers. Water, gas and electricity are provided for the recitation rooms and the dark room and laboratories.

This department is housed in the engineering and physics building. Its facilities for instruction are equal to those of any in the Northwest.

The laboratory equipment includes such expensive pieces as analytical balances, laboratory clock making electrical contact every second, cathetometer, spectroscopes, microscope, photometers, stereopticon and reflectoscope (arc light), standard cells, dynamos, electromotors, transformers, galvanometers, storage battery, induction coils, ammeters, magnetometers, voltmeters, wattmeters, Wheatstone bridges, polariscope, quadrant electrometer, lathes and wireless telegraphy and X-Ray apparatus.

The following subjects are offered in this department:

For the description of Physics 1 and 2, see the preparatory department.

- 3 General Physics. Three recitations and two laboratory periods per week, first semester; required in the sophomore year of the Courses in Engineering and Pharmacy, in the junior year of the Agriculture Course, and in the sophomore or junior year of the General Science Course. Young ladies following the General Science Course



may elect Home Economics 4 and 7 instead of Physics 3; prerequisite, Physics 2 and Mathematics 9.

Mechanics of solids and fluids and heat with numerous examples. Static electricity and magnetism. Exact measurements of mass, distance, time, calorimetry, etc.; study of electrical and magnetic fields. Texts: Hastings and Beach; Austin and Thwing.

- 4 General Physics. Three recitations and two laboratory periods per week, second semester; required in the same courses as Physics 3, except in the Agriculture Course; young ladies pursuing the General Science Course may elect Home Economics 3 instead of Physics 4; prerequisite, Physics 3.

Electricity and its applications in the dynamo, motor and transformer, electric light and study of electrical and magnetic fields; nature and velocity of sound, refraction and reflection of light, interference and color, laboratory work on topics mentioned.

Text: Hasting and Beach; Austin and Thwing.

- 5 Advanced Physics. Four recitations and one laboratory period per week, first semester; elective in the junior or senior year of the General Science Course; prerequisite, Mathematics 12 and Physics 4. Mechanics, kinematics, kinetics, mechanics of fluids and heat and its applications; magnetism, static electricity, electrolysis; laboratory work and measurements covering topics mentioned.

Texts: Nichols and Franklin, Vols. 1 and 2; Nichols' "Laboratory Guide."

- 6 Advanced Physics. Four recitations and one laboratory period per week, second semester; elective to the same classes as Physics 6. Induction currents, primary batteries, electric oscillations and waves, nature and motion of sound, physical theory of music, nature and propagation of light, refraction, reflection, interference, color and polarization; laboratory work.

Text: Nichols and Franklin, Vol. 3; Nichols' "Laboratory Guide."

- 7 Heat. Three recitations and one laboratory period per week, first semester; elective in the senior year of the General Science Course; prerequisite, Physics 6.

Sensible and latent heat, dynamical generation of heat, thermometry, calorimetry, specific heat, atomic and molecular heat capacities, evaporation, ebullition, vapor densities, cooling, diathermacy, conductivity and dynamical equivalent of heat, laboratory work covering topics mentioned.

Text: Preston's "Theory of Heat;" Maxwell's "Heat."

- 8 Light. Three recitations and one laboratory period per week second

semester; elective to the same classes as Physics 7, of which it is a continuation.

**Text:** Preston's "Light."

Shadows, and images, spectrum, velocity of light, color, phosphorescence, fluorescence, diffraction, measuring waves, prisms and polarization; laboratory work.

### Department of Botany

PROFESSOR OLIVE, MR. ———

In the work of this department, the structure, physiology, classification and pathology of plants, and the fundamental problems of cell structure and functions are studied, as well as the direct application of the science to pharmacy and agriculture. Both the elementary and advanced laboratories are equipped with new and modern microscopes and other necessary apparatus for carrying on advanced and original research work. The department has also a fairly complete and convenient herbarium of the phanerogamic and mycological flora of the northern United States.

- 1 General Botany. Two recitations and three laboratory periods per week, first semester; required in the sophomore year of the Courses in Agriculture, Home Economics and Pharmacy, elective in the sophomore year of the General Science Course; prerequisite, the work of the freshman year.

The general principles of biology as illustrated by plants, a study of the life histories of types of plants, including their physiology and systematic relations. A course designed to give a general knowledge of the plant kingdom and to develop powers of accurate observation.

- 2 General Botany. Two recitations and three laboratory periods per week, second semester; required and elective in the same courses as Botany 1, of which it is a continuation; prerequisite, Botany 1.
- 3 Plant Anatomy and Physiology. One recitation and two laboratory periods per week, first semester; required in the horticulture and the agronomy groups, Agriculture Course, senior year; elective in the junior year of the General Science Course and in the senior year of the Home Economics Course; prerequisite, Botany 1 and 2. A study of plant cells and their arrangement into tissues, together with their general physiological relations.
- 4 Mycology and Plant Pathology. Two laboratory periods per week

first semester; required and elective in the same classes as Botany 3; prerequisite, Botany 1 and 3.

Special morphology and classification of the fungi. The plant diseases of economic importance are especially emphasized, together with the methods of prevention or of treatment; prerequisite, Botany 2.

- 5 Taxonomy of Pteridophytes, Gymnosperms and Angiosperms. Two recitations and three laboratory periods per week, second semester; required and elective in same classes as Botany 3; prerequisite, Botany 1 and 2.

- 6-7 Cytology and Botanical Methods. Two recitations and three laboratory periods per week, throughout the year; elective in the senior year of the General Science Course; prerequisite, Botany 1, 2 and 3.

Lectures, recitations and laboratory work on the general activities, reproduction and nutrition of the plant cell. The theoretical bearing of the subject on heredity, plant breeding, etc. Methods of imbedding, sectioning and staining.

- 8 Pharmacognosy. Five recitation and laboratory periods per week, second semester; required in the junior year of the Course in Pharmacy; prerequisite, Botany 1. The sources, characteristics, etc., of the common drugs.

---

## Entomology and Nature Study

PROFESSOR MATHESON.

The work of this department will be conducted in conjunction with the botanical department which is located in the Botany and Horticultural Building. The botanical laboratory is provided with all the apparatus necessary for biological work and the equipment will be available for use in this department. The following work is offered:

For description of subjects 1 and 2, see the preparatory department.

- 3-4 Entomology. Two recitations and laboratory periods per week, first and second semesters; required in the junior year of the animal husbandry and horticulture groups, in the senior year of the agronomy group, Agriculture Course; prerequisite, Zoology 3.

A general course dealing with the anatomy, classification and life histories of insects. It will consist of lectures, recitations and lab-

oratory work throughout the year. The work during the second semester will be largely devoted to the discussion of the more important insect pests and of methods of controlling them.

Texts: Comstock's "Manual for the Study of Insects;" Comstock and Kellogg's "Elements of Insect Anatomy."

- 5 Nature-study. Three recitations per week, first semester; elective in the junior or senior year of the General Science Course, and in the senior year of the Home Economics Course; prerequisite, Zoology 3 and Botany 2.

Lectures and discussions of methods. This course is intended for those who expect to teach in the public schools of the state. Its object will be to give the nature-study point of view in the teaching of the natural sciences in the first six or eight grades. It will be a discussion of methods and materials rather than a course in elementary science, and will deal primarily with the biological side of nature-study.

---

### Department of Zoology

DR. MOORE, MR. MILLER.

The work offered by this department is designed, first, to give the student a general knowledge of the principles of animal biology; second to give especial attention to technique and to the development of originality in the individual. Students contemplating the study of medicine may by a judicious selection of subjects in this and other departments secure an equivalent to the first year's work offered by the medical colleges.

The department is adequately equipped with specimens and apparatus, to which frequent additions are made.

For description of Zoology 1, see the preparatory department.

- 2-3 General Zoology and Physiology. Two recitations and three laboratory periods per week, first and second semesters; required in the sophomore year of the Courses in Agriculture and General Science, and in the junior year of the Home Economics Course; prerequisite, Art 1 and all the subjects below the sophomore year.

a, General Zoology. A study of type forms of invertebrates and vertebrates, and the elements of histology and embryology.

Texts and references: Hertwig's "Manual of Zoology;" Parker & Haswell's "Text-book of Zoology;" Lange's "Comparative Anatomy."

b, Physiology. This subject continues throughout the last half of



the second semester. Lectures, recitations, demonstrations, and required readings in advanced human physiology.

Texts and references: Thornton's "Human Physiology;" "American Text-book of Physiology;" Landois' "Human Physiology;" Verworn's "General Physiology."

c, Veterinary Physiology. Required of students of agriculture during the last half of the second semester instead of human physiology. Text: F. Smith's "Manual of Veterinary Physiology."

- 4-5 Anatomical Methods. Three recitations and two laboratory periods per week first and second semesters; required in the junior year of the Pharmacy Course.

This subject is intended to acquaint students preparing for the study of medicines with anatomical nomenclature, and methods of dissection. It includes the study of the anatomy of the cat, with special reference to physiology.

Texts: Davidson's "Mammalian Anatomy;" Reigart & Jennings' "Anatomy of the Cat;" Morris' "Human Anatomy."

- 6-7 Histology. Five recitations and laboratory periods per week, first and second semesters; required in the senior year of the veterinary group, Agriculture Course, elective in the junior year of the General Science Course; prerequisite, Zoology 3 or 5.

The structure of the cell and the tissue elements together with microtechnique during the first semester; vertebrate organology, the microscopic structure of vertebrates during the second semester.

Texts and references: Bohm-Davidoff's "Text-book of Histology;" Wilson's "Cell;" Stohr's and Szymonowics-MacCallum's "Text-books of Histology."

- 8-9 Comparative Anatomy of the Vertebrates. Five recitations and laboratory periods per week, first and second semesters; elective in the senior year of the General Science Course; prerequisite, Zoology 5 or 7.

An elective designed for those students especially interested in anatomy and zoology.

Text and references: Wiedersheim's "Comparative Anatomy;"<sup>4</sup> Flower's "Osteology of the Mammalia;" Jayne's "Mammalian Anatomy;" Huxley's "Manual of the Anatomy of the Vertebrate Animals."

---

### Department of Geology

The object of the course in geology is to give the student a review of the physical condition of the earth: the various dynamic agencies and the results of their activities; the origin and the structure of rocks; and, finally, the geological history of the

globe and the appearance and development of the principal races of animals and plants.

The work is based on Le Conte's "Elements of Geology." Collections of rocks and minerals, physiographic and geological models and also lantern slides, afford ample means for illustration.

The following work is offered:

- 1 Geology. Five recitations per week, first semester; required in the animal husbandry, the horticulture and the agronomy groups, Agriculture Course, and in the Civil Engineering Course, senior year; elective in the senior year of the General Science Course.

---

## Department of Chemistry

PROFESSOR SHEPARD, MR. KOCH, MR. VIOL.

This department is equipped with the latest and most approved appliances for instruction.

The student upon beginning the subject is assigned a desk in the main laboratory. This desk is supplied with a set of reagent bottles, gas and water fixtures. In addition to these a supply of all needful apparatus, such as test tubes, generating flasks, and the like are furnished. The main laboratory, which is located on the first floor of the Chemistry and Pharmacy Building, accommodates sixty-four students all working at the same time.

Upon completing the necessary elementary work the student now finds a quantitative laboratory at his disposal. This laboratory accommodates twenty students working together. It is supplied with all quantitative apparatus, such as precipitation flasks, desiccators, lamps and crucibles.

In connection with the quantitative laboratory is a balance room supplied with high grade Trömer quantitative balances. The work is so planned that the student has laboratory work together with didactic instruction throughout the course.

The experiment station laboratories are also located at this college, and their costly and technical appliances and the practical work in constant progress there are within reach for instruction.

The following work is offered:

- 1 Elementary Inorganic Chemistry. Five recitations and laboratory periods per week, first semester; required in the freshman year of all the four year courses; prerequisite, Physics 2.  
History of chemistry, elements, compounds, symbols, valence, atomic weights, chemical equations, oxygen, hydrogen, nitrogen, chlorine, bromine, fluorine, iodine, sulphur, phosphorus, silicon and their compounds. Bases, salts, acids and alkalies. The metals and their compounds, separation of metals, groups of metals and uses of their compounds. Detection of the non-metallic elements and their compounds.  
Text: Shepard's "Elements of Chemistry."
- 2 Elementary Organic Chemistry. Five recitation and laboratory periods per week, second semester; required in the freshman year of all the four year courses; prerequisite, Chemistry 1.  
The principal classes of organic compounds, the characteristics and properties of each class and the uses of their various compounds. Detection of principal metals and the working of a list of unknowns; the detection of principal organic compounds.  
Text: Shepard's "Elementary Organic Chemistry."
- 3 Quantitative Chemistry. Five recitation and laboratory periods per week, first semester; required in the sophomore year of the Courses in Agriculture and Home Economics, in the junior year of the Pharmacy Course; elective in the sophomore year of the General Science Course; prerequisite, Chemistry 1 and 2.  
The apparatus and its uses. Explanations of methods of quantitative determinations and reports of students' analyses. The quantitative analyses of typical chemical compounds, e. g., calcite, magnesium sulphate, metallic ores and coal.  
Text: Olsen's "Quantitative Chemistry."
- 4 Chemistry and Physiology of Foods. Five recitations and laboratory periods per week, second semester, required in the junior year of the Pharmacy Course and the dairy group, Agriculture Course; in the sophomore year of the Home Economics Course; elective in the senior year of the General Science Course; prerequisite, Chemistry 1, 2 and 3.  
Food nutrients, chemical characteristics and offices of same, physiology of same, metabolism, balanced rations, standard dietaries. Study of food adulteration. Experiments in digestion of foods, offices of digestive secretions. Detection of adulterants, coloring matter and preservatives.
- 5 Agricultural and Sanitary Analysis. Five recitation and laboratory periods per week, first semester; elective in the senior year of the

General Science Course; prerequisite, Chemistry 1, 2 and 3.

Analysis of foods, feeding stuffs, water. Use and analysis of disinfectants, germicides, etc. Lectures, Official Methods American Association of Official Agricultural Chemists.

- 6 Agricultural Chemistry. Three recitations per week, second semester; required in the sophomore year of the Agriculture Course, elective in the junior year of the General Science Course, prerequisite, Chemistry 1, 2 and 3.

Text: Johnson's "Agricultural Chemistry."

- 7 Industrial Chemistry. Three recitations per week, first semester; required in the senior year of the dairy group, Agriculture Course; elective in the junior year of the General Science Course; prerequisite, Chemistry 1, 2 and 3.

Chemistry of manufacturing glass, paper, sugar, petroleum, explosives, acids, water, air, mortars, pigments, photography, alkalies and gases. Demonstrations of examples including water pollution, purification, artificial illumination, petroleum testing, fermentation, air contamination, disinfection, ventilation, bleaches and dyeing.

- 8 Electro Chemistry. Three recitations and one laboratory period per week, second semester; required in the junior year of the Course in Electrical Engineering; prerequisite, Chemistry 1, 2 and 3. Electrolysis, separation of compounds by means of the electric current. Uses of electrical furnace in obtaining metals.

---

## Department of Pharmacy

PROFESSOR WHITEHEAD.

The work of this department is intended primarily to teach thoroughly young men and women the science of pharmacy. The work of the preparatory department is prerequisite to the subjects of this department.

The student finishing the two-year course in Pharmacy given on page 54 may receive the degree of Pharmacy Graduate (Ph. G.) This is the only course of the kind offered in the state and receives the hearty commendation of the State Board of Pharmacy.

The following letter shows how the work in this college compares with that in other schools in pharmacy:



State of New York,  
Education Department,  
Albany.

January 30, 1907.

Dean B. T. Whitehead,  
Pharmaceutic Dept. South Dakota Agricultural College,  
Brookings, S. D.

Dear Sir:

I beg to inform you that at the recent meeting of the ad interim committee held in Albany, January 7, 1907, it was voted that the Pharmaceutic Department of the South Dakota Agricultural College of Brookings, S. D., be registered in full in group one.

Yours respectfully,

HOWARD J. ROGERS,

First Assistant Commissioner of Education.

This means that we meet the full requirements, both preparatory and professional, of the Educational Department of the State of New York.

This line of work offers many inducements to young men. The requests of the druggists of the state for our graduates are far in excess of the supply and the pure food and drug laws have opened up a new field for young men who are competent drug and food assayers.

The two years of pharmacy work may all be applied towards the degree of Bachelor of Science which is given upon the completion of the four-year course in pharmacy. (See page —.) This longer course is recommended to those who intend to take up the study of medicine or dentistry, or who wish to prepare for teaching the sciences in the high schools of the state.

The fees for work in this department are the same as for other college work, i. e., six dollars tuition and two dollars for each laboratory per semester.

The following subjects with the exception of 10, are all required for both the degree of Pharmacy Graduate and the degree of Bachelor of Science in Pharmacy:

- 1 Pharmacy Latin. Five recitations per week, first semester, junior year.

The subject is taught with special reference to its application in pharmacy. The vocabulary employed is strictly pharmaceutical. Text: Robinson's "Grammar of Pharmacy and Medicine."

- 
- 2 **Materia Medica.** Five recitations per week, first semester, senior year; also elective in the General Science Course.  
Medicinal properties, doses and poisonous effects of the various medicines, together with the antidotes which the pharmacist may be required to administer in an emergency, will receive full and careful treatment.  
Text: Potter's "Materia Medica, Pharmacy and Therapeutics."
- 3 **Materia Medica.** Five recitations per week, second semester, senior year.  
Continuation of Pharmacy 2.
- 4 **Pharmacy.** Five recitations per week, first semester, senior year; prerequisite, Chemistry 2.  
Forms and uses of pharmaceutical apparatus, weighing by apothecary and metric systems, specific gravity of solids and liquids, heating apparatus, determination of boiling and melting points, distillation, comminution, solution, precipitation, filtration, crystallization, percolation, and study of official medicines, waters, syrups, mucilages, mixtures, spirits, elixirs, liniments, infusions, tinctures, fluid extracts, oleoresins, and extracts.  
Text: Remington's "Practice of Pharmacy."
- 5 **Pharmacy Laboratory.** Three laboratory periods per week, first semester, senior year.  
Preparation of waters, syrups, mucilages, etc., mentioned in Pharmacy 4, and must be taken up in connection with it.  
Text: Remington's "Practice of Pharmacy."
- 6 **Pharmaceutical Problems.** Two recitations per week, first semester, senior year.  
Relationship of metric, apothecary, and imperial systems of weights and measures, specific gravity, specific volume, percentage problems, concentration and dilution, alligation and chemical problems.  
Text: Olberg's "Pharmaceutical Problems."
- 7 **Pharmacy.** Five recitations per week, second semester, senior year; prerequisite, Pharmacy 4 and 5.  
Official inorganic salts and their compounds, solutions, emulsions, powders, pills, ointments, and plasters; reading prescriptions.  
Texts: Remington's "Practice of Pharmacy," Ruddiman's "Incompatibilities in Prescriptions."
- 8 **Pharmacy Laboratory.** Five laboratory periods per week, second semester, senior year; prerequisite, Pharmacy 5 and 6.  
Compounding of prescriptions, making of inorganic salts, solutions, emulsions, powders, pills; reading and compounding prescriptions.  
Must be taken same term as Pharmacy 7.

Texts: Remington's "Practice of Pharmacy," Ruddiman's "Incompatibilities in Prescriptions," Olberg's "1,500 Prescriptions."

- 9 Volumetric Analysis and Drug Assaying. Five recitations and laboratory periods per week, second semester, senior year; also elective in the sophomore year of the General Science Course; prerequisite, Chemistry 3.

There are at present in the U. S. Pharmacopoeia 149 volumetric and 35 gravimetric assays. In this subject we endeavor to give enough of this work to enable a student to make any of these assays in an intelligent and accurate manner. The students are required to make their own volumetric and indicator solutions. A short course in urine analysis is given in connection with this work.

Texts: "U. S. Pharmacopoeia," Schimpf's "Volumetric Analysis," Lyon's "Pharmaceutical Assaying;" Lecture notes by the teacher.

- 10 Veterinary Materia Medica. Three recitations per week, second semester; required in the junior year of the veterinary group, Agriculture Course.

A study of the medicinal properties, doses, and uses of the principal drugs used in veterinary medicine.

Texts: Winslow's "Veterinary Materia Medica and Therapeutics."

---

### Department of Music

HENRY H. LOUDENBACK—Piano, pipe-organ and theoretic branches.

FRANCIS J. HAYNES—Voice and band instruments.

CARL CHRISTENSEN—Violin, stringed instruments.

EDNA PERRY—Assistant in piano.

### DEPARTMENTS.

1. Piano, piano ensembles.
2. Voice, choral organizations.
3. Violin, stringed instruments, orchestra.
4. Pipe-organ.
5. Band instruments.
6. Theoretical studies, as harmony, history of music, etc.

### FREE ADVANTAGES.

1. Faculty recitals.
2. Choral organizations.

3. Piano technic classes.
4. Elements of music class.
5. History of music class.
6. Harmony class.
7. Composition class.
8. Theory of interpretation and music forms.
9. Orchestra.
10. Private recitals.
11. Piano practice.
12. Lectures in music as an art.
13. Class in ear drills and sight reading.
14. Sight singing class.

The demand at the present time is for men and women who are equally developed morally, mentally and physically.

The chief function of music is to express and excite emotion, hence the pursuance of the study of music tends to develop the emotional powers, and to refine and uplift the moral qualities. As the proper study of music requires as much mental concentration as any other line of study, it is equally strengthening to the intellect.

The aim of this department is to furnish the best methods for the acquirement of a thorough musical education and to develop "thinking" musicians, not merely musicians of "feeling" alone.

Opportunity is offered, in connection with the College, for a liberal and practical education, and the heads of the various departments are particular to urge students of music to avail themselves of this opportunity. A mere technical training will not suffice. The most successful teachers and students are those who seek the broadest intellectual development.

The prices charged for tuition in the music department are very reasonable when one considers the many free advantages that are offered.

The faculty consists of teachers of superior ability who are specialists in their respective lines.

The department of music, with its various advantages, offers almost as good results as can be attained in the acknowledged centers of musical learning.



---

### EDUCATIONAL REQUIREMENTS.

Students who receive certificates or diplomas in music must have completed the work of the preparatory department of the college or its equivalent, which is the work of the first two years of the ordinary high school course. No student will be permitted to enroll in music who has not completed the work of the eighth grade of the public schools; and except in special cases, students will not be allowed to pursue studies in music unless one college subject, at least, is taken at the same time.

### EXPENSES.

The following fees will be charged per semester for instruction under the various instructors:

Piano and pedal organ (professor of music), two half hour lessons per week, \$18.00.

Piano (of assistant), two half hour lessons per week, \$15.00.

Voice culture (head of voice department), two half hour lessons per week, \$18.00.

Voice culture (of assistant), two half hour lessons per week, \$15.00.

Violin, viola, cello (head of violin department), two half hour lessons per week, \$18.00.

Theoretical branches—Free to all eligible students enrolled in department of music, and to those electing them in the General Science Course.

Solfeggio sight singing class—Free tuition.

(Two half hour lessons per week).

Piano Practice—Free to all students enrolled in the department of music.

Organ rental—One hour per day, one semester, \$4.00

Clavier rental—One hour per day, one semester, \$3.50.

Special fees will be charged short course students who desire to pursue any of the branches in the department of music.

Diplomas, \$4.00.

Teachers' certificates, \$2.00.

### RECITALS.

Public and private recitals are given frequently by the

various members of the faculty and by students. Private recitals are given every week, in which all students are allowed to participate. Students are required to take part in any of these recitals, if prepared. This serves as a special impulse towards earnestness and many accomplish much better work under such an incentive. Aside from this, frequent appearance before others tends to give the student that necessary self-control and repose without which it is impossible to become a finished performer.

### CHORAL ORGANIZATIONS AND ORCHESTRA.

A male glee club and a ladies chorus are organized at the beginning of the year, to which any student or faculty member of the college is eligible at the recommendation of the instructor in voice. Citizens of Brookings and vicinity are cordially invited to enroll in these organizations also. The two separate organizations are combined the last half of the year as a choral union, the intention being to render some of the choral masterpieces, and oratorios and cantatas.

A large symphony orchestra is also maintained, to which any student, who is qualified, is eligible. Residents of Brookings, who are qualified, are also requested to enter this organization.

### ELEMENTS OF MUSIC AND EAR TRAINING CLASSES.

These classes are free to all students of the music department at whatever standing they may have in any department. The elements of music class gives the students thorough training in the fundamental principals of music. The class in ear training gives the student excellent training in listening to and learning to distinguish by their relation to each other, the various tones of the scale, combinations of tones, etc. This class also drills in exercises for sight reading, time beating and most particularly lays a good foundation for the systematic development of the memory. All students pursuing the first year of the Collegiate Course in music are required to attend these classes. Drills are also given at this class that enable the student to gain self-control over his mental powers.

## PLAN OF STUDY.

The plan of study consists of two general courses, the Preparatory and the Collegiate Courses in Music.

The Preparatory Course is designed for beginners, or for those who have not been thoroughly trained in the rudiments of music, and prepares the student for entrance into the Collegiate Course. The time demanded of the student to finish this course depends upon his ability, also upon the advanced stage of the pupil's development when entering. The time generally required will vary from one to three years.

The Collegiate Course scheduled above leads to graduation and consists of three years' work. Students upon completing the requirements for the second year's work will be granted a teacher's certificate and upon completing the third year's work will receive a diploma.

It is impossible to give a definite outline of the course of study to be followed, as it will vary according to the pupil's ability. However, some things must be studied, and beyond that, the instruction is adapted to the personal needs of each student. The work offered in the different lines of music is described below.

## PIANO-FORTE.

The methods of technical instruction here employed are known as the Virgil clavier and the Leschetitzky methods. The claviers are judiciously used in connection with these methods and each student is required to practice a certain amount of time each day upon one of these instruments.

The three all-important factors in artistic piano playing are a positive technic, a musical touch and repose, and the clavier helps the student acquire these quickly by demanding greater powers of concentration of the will.

The preparatory work in piano embrace eight distinct subjects: (a) mind training; (b) physical development; (c) ear training; (d) technic; (e) rythmic studies; (f) sight reading; (g) sight playing; (h) memorizing.

Selection will be made from the following list of studies in pursuing this course:

Kohler Studies; Czerny (Leibling's Book I); Gurlitt studies; Loeschhorn, Op. 65 and 52; Kunz, 200 canons; Clementi's Sonatinas; Kuhlau's Sonatinas; MacDougall's studies in melody playing; easy pieces by modern composers and the masters also. Other studies by good composers, not mentioned, may be used.

The piano work required for graduation in the Collegiate Course in Music extends throughout three years and is as follows:

#### FIRST YEAR.

Heller, selected studies (Presser edition); Czerny, (Lieblings Book II); Duvernoy, Op. 120; Loeschhorn, Op. 66, Book I; Czerny, Op. 553 (Octaves), Bach first studies; Vogt, Op. 105; Cramer, Buelow; Bertini, Op. 32 and 29; Le Couppé; Beethoven, variations; Beethoven, variations, Sonata, Op. 49 or Op. 79; Mozart Sonata; Haydn Sonata; piano solos by modern and romantic composers.

#### SECOND YEAR.

Bach inventions (two and three voiced); Bach easy Fugues and Preludes; pedal studies; Beethoven sonata; Czerny, Op. 740; Mendelssohn, Song Without Words; Jensen, Op. 32; Kullak octaves; Moszkowski's scales; solos by Grieg, Schubert, Chopin, Schumann and modern composers; first or last movement of a concerto; ensemble work.

#### THIRD YEAR.

Bach—Well tempered clavichord; Chopin, Op. 10 and 25; Moscheles, Op. 70; Clementi, Gradus ad Parnassum; Concerto—Mozart, Beethoven, Mendelssohn, or some other composer; Kullak, octave studies; Suite—Grieg or Schumann; Liszt, transcriptions and original compositions; ensemble work; solos by the masters, both modern and classical; sonata—Beethoven, Scarlatti, and Schubert.

A public program of from one hour and forty-five minutes to two hours in length, to be played in public, unassisted and from memory, will be required of the applicant.

Post graduate work is also offered in this department in the following studies:

Czerny, School of Virtuosity; Bach, organ fugues transcribed by Liszt; Bach—partitas and suites; Scarlatti's sonatas; Chopin, etudes and compositions; Schubert, sonatas and impromptus; Schumann, novelties. Selections by Brahms, Rubinstein, Henselt, Moszkowski and others. Beethoven sonata; Concertos—Beethoven, Rubinstein, Chopin and others.



## VOICE.

The preparatory work is as follows:

Simple exercises in tone placement and breath control. Interval study. Scales and Arpeggio. Panofka A. B. C., Neidlunger's Vocalises, Sieber eight measure vocalises, Whelpton vocal studies. Simple songs for application of principles.

The work in voice required for graduation in the Collegiate Course in Music scheduled below extends throughout three years, as follows:

### FIRST YEAR.

Tone placement and breathing exercises. Scales and arpeggio. Concone daily exercises and vocalises. Panofka, Lamperti preparatory, and Bordogni easy vocalises. Song study in phrasing and interpretation.

### SECOND YEAR.

Tone placement and breath control. Exercises by Nava, Marchesi, and Lablache; vocalises by Bonaldi and Nava. Vaceai Italian studies. Study of the best modern and standard classic songs.

### THIRD YEAR.

Study of trill and other musical embellishments. Velocity studies by Girandet, Viardot and others. Lamperti studies in Bravura. Bordogni vocalises. French, German and Italian songs. Oratorio and operatic arias. Formation of repertory.

## VIOLIN.

The preparatory work is as follows:

Position; tone production on open strings; the most important rudiments of musical theory in general; violin schools by De Beriot and Mazas; duets by Geabauer; solos with piano accompaniment by Herman, Dancala, etc.

The work required for graduation in the three years' Collegiate Course scheduled below is as follows:

### FIRST YEAR.

Exercises for obtaining wrist bowing; scales in two octaves from

memory for velocity; the different positions; Kayser's Etudes, Part I; duets by Pieyl and Maza; solos with piano accompaniment by Danela, Sitt, De Beriot, Bohm, etc.

#### SECOND YEAR.

De Beriot's Violin School, Part II; Schradieck's Technical Studies; Kayser's Etudes; Part II; Maza's Etudes Specials and Etudes Brillantes; Studies by Kreutzer; appropriate sonatas by Mozart, Tartini, etc.; Concerts by Viotti, De Beriot, Rode, etc.

#### THIRD YEAR.

Concertos by Viotti, De Beriot, Kreutzer, Rode, Spohr, etc.; Sonatas by Beethoven and miscellaneous compositions by Bach, Wieniawski, Mendelssohn, and others.

#### ORGAN.

The preparatory work is as follows:

Rink Organ School; elements of organ playing, touch, etc.; study of organ registers; easy pieces by modern composers; hymn playing.

Two years of Collegiate work is offered along this line, upon the completion of which an organist's certificate is granted. The work is as follows:

#### FIRST YEAR.

Buck, choir accompaniment; Buck, pedal phrasing studies; Bach, little preludes and fugues.

#### SECOND YEAR.

Bach, little preludes and fugues, Mendelssohn, little preludes and fugues; solo compositions from the classical and modern school.

#### MUSICAL THEORY.

The subjects along this line extend throughout the three years of the Collegiate Course in Music and are as follows:

#### FIRST YEAR.

##### FIRST SEMESTER.

1 Elements of Music. Two recitations per week.

The work during first semester consists of getting a thorough knowledge of the fundamental principles governing the laws of music as a science and the acquiring of musical terms relating to movement, degrees of power, etc.

#### SECOND SEMESTER.

- 2 Elements of Music. Two recitations per week.

The study of elementary harmony is begun and the student is taught to construct major and minor scales, major and minor triads, dominant seventh chords, dominant major and minor ninth chords, and diminished seventh chords. The student acquires the ability to analyze various intervals and their inversions and learns the natural resolution of the most familiar dissonances and discords. The student is required to make daily applications of principles to the keyboard.

#### SECOND YEAR.

##### FIRST SEMESTER.

- 3 Harmony. Two recitations per week.

Part writing in four parts, open and close harmony, study of triads, seventh chords and their resolutions, chords of the augmented sixth, chords and their resolution, and practical keyboard work.

- 4 Interpretation of Music. Two recitations per week; elective in the senior year of the Courses in General Science and Home Economics. Accent, motive, phrase, etc.; slur and uses; punctuation of phrase, period, etc.; modes of punctuation, cadences; various kinds of periods; musical devices and details; nuance and ornamentation, signs and symbols; rythm; movement; thematic style; lyric style; harmonic style.

Text: Goodrich's "Theory of Interpretation."

- 5 History of Music. Three recitations per week; elective in the senior year of the Courses in General Science and Home Economics. Purpose of study; music of ancients; music of Greeks; ecclesiastical system; notation; music outside the church; Polyphonic Era; various schools; church polyphony music reform; musical instruments; organ and early organists; beginning of opera and oratorio; Neapolitan schools; early singing and singers; French and English opera; German opera; evolution of the piano forte; early English and French clavier schools; German polyphonic clavier school; German sonata composers to Haydn.

Text: Baltzell.

##### SECOND SEMESTER.

- 6 Harmony. Two recitations per week.

Melody writing and harmonizing of a given melody, modulation and improvisation in a given key. Harmonic and melodic analysis of the classics. Practical keyboard work.

- 7 Interpretation of Music. Two recitations per week; elective in the senior year of the Courses in General Science and Home Economics. Discord and dissonance; harmonic influence; accompaniment; style and expression; interpretation in general; fugue, tone color, epochs in music; dance forms, modern and classic; miscellaneous forms; Romantic forms; mixed forms; rondo form; sonata form; symphonic form; overture, concerto; etc.; song forms, etc.
- 8 History of Music. Three recitations per week; elective in the senior year of the Courses in General Science and Home Economics. Haydn, Mozart, Beethoven; Beethoven and sonata; violin and makers, violin playing and violin music; orchestra and absolute music; Romantic opera; Italian School of 19th century; Wagner's Music dramas; other schools; piano playing and composition; Clementi to Field; Romantic school and its masters; pianists and teachers since Liszt; Oratorio after Mendelssohn; symphonic poem in Germany; German opera since Wagner; old and new schools in France; musical regeneration in Italy; England and the Netherlands; National schools, Bohemia and Scandinavia; music in the United States; American composers; musical education.

### THIRD YEAR.

#### FIRST SEMESTER.

- 9 Advanced Harmony. Two recitations per week.  
Melody writing, harmonizing of melodies; improvisation; single and double counterpoint.

#### SECOND SEMESTER.

- 10 Advanced Harmony. Two recitations per week.  
Canon and fugue; analysis of fugues; original composition.

### Collegiate Course in Music

#### FIRST YEAR.

##### First Semester—

Elements of Music.....	a 2
Lectures on Music as an Art, Science, etc.....	a 1
Piano, violin or voice.....	a 2
Piano technic (piano students).....	a 1
Sight singing.....	a 1



---

An elective subject in English.....	a 5
Physical culture.....	2

## Second Semester—

Elements of Music and elementary harmony.....	a 2
Ear training, sight reading, etc.....	a 1
Piano, violin or voice.....	a 2
Piano technic (piano students).....	a 1
Sight singing.....	a 1
An elective subject in English.....	a 5
Physical culture.....	2

## SECOND YEAR.

## First Semester—

Harmony .....	a 2
Interpretation of Music and music forms.....	a 2
History of Music.....	a 3
An elective subject in history.....	a 3
Piano, violin or voice.....	a 2
Piano (technic piano students).....	a 1
Piano (voice and violin students).....	a 1
Physical culture.....	2

## Second Semester—

Harmony .....	a 2
Theory of Interpretation and music forms.....	a 2
History of Music.....	a 3
An elective subject in history.....	a 3
Piano, violin or voice.....	a 2
Piano technic (piano students).....	a 1
Piano (voice and violin students).....	a 1
Physical culture.....	2

## THIRD YEAR.

## First Semester—

Advanced harmony.....	a 2
Psychology .....	a 3
An elective subject in history, French or German.....	a 4
Piano, violin or voice.....	a 2
Piano technic (piano students).....	a 1
Vocal Culture (piano students).....	a 1
Physical Culture.....	2

## Second Semester—

Original composition.....	a 2
An elective subject in history, French or German.....	a 4
Piano, violin or voice.....	a 2
Psychology and its relation to music.....	a 1
Piano technic (piano students).....	a 1
Vocal Culture (piano students).....	a 1
Physical Culture.....	2

---

### Department of Art

MISS CALDWELL, MISS GODDARD.

The aim in arranging the subjects in this department has been to offer such work as shall correlate with other college courses in becoming a means to a general education. The object of the work is to cultivate an appreciation of beauty and to develop technical skill.

The department is equipped with a good collection of casts and photographs, and with such tools as are necessary for class work.

A certificate is given to students who satisfactorily complete a course in academic drawing and painting, consisting of Art 1, 2, 6, 7, 8, 9 and 10, or a course in decorative design and handicraft, consisting of Art 1, 2, 4, 5, 6, 7, 11.

The time necessary to secure a certificate depends on the ability of the student, three years being an average length of time, although the work may be extended over a longer period and carried with a regular college course.

For description of Art 1 and 2, see the preparatory department.

- 3 Theory of Design. Two recitations per week, second semester; required in the freshman year of the Home Economics Course; prerequisite, Art 1.

This subject treats of the principles of design and their practical application in the home. The history of ornaments is briefly reviewed.

- 4 Theory and Practice of Design. Four recitations and laboratory periods per week, first semester; elective in the senior year of the

General Science Course; prerequisite, Art 1.

Two periods a week for lectures and criticism of original designs, and three periods for the carrying out of the designs in various crafts, such as leather and metal work, and wood-carving.

- 5 Theory and Practice of Design. Four recitations and laboratory periods per week, second semester; elective in the senior year of the General Science Course; prerequisite, Art 1 and 4.

Continuation of Art 4, with the addition of the study of historic ornament.

- 6 Art History. Two recitations per week, first semester; required in the Home Economics Course; elective in the General Science Course, senior year.

History of architecture and sculpture.

- 7 Art History. Two recitations per week, second semester; required in the Home Economics Course, elective in the General Science Course, senior year.

History of painting. Reference books in the general library, and a collection of photographs in the department, furnish material for this course.

- 8 Antique Class. Five hours per week, first and second semesters; elective to students pursuing special work in art; prerequisite, Art 1 and 2.

Study of heads from the antique in full light and shade for construction and modelling; figure drawing from the antique; sketching from life.

- 9 Study of Values. Five hours per week, first and second semesters; elective to students pursuing special work in art; prerequisite, Art 1 and 2.

Value studies in charcoal from still-life as preparatory work for painting.

- 10 Painting. Two laboratory periods per week, first and second semesters; elective to students pursuing special work in art; prerequisite, Art 9.

Still life and flowers in oil, pastel and water-color.

- 11 Design and Handicraft. Four hours per week, first and second semesters; elective to students pursuing special work in art; prerequisite, Art 5.

Plant and animal form in designs, original designs in color to be applied in the crafts, and in needle-work in the home economics department. The crafts offered are leather and metal-work, wood carving, pyrography and basket-weaving.

- 12 Normal Course. Five hours per week, first and second semesters; elective to students pursuing special work in art; prerequisite, Art 1.

In this course such work is given in drawing, color, and design, as will be an aid to students intending to teach in the public schools. Outlines for the different grades are discussed.

---

## Department of Elocution and Physical Culture

MISS MUSGRAVE.

The regular course offers two years work, running through the sophomore and junior collegiate years. The course is elective and the credits are given on the same basis with other subjects.

In addition a special line of work has been arranged for the students of agriculture to be given during the junior year.

The regular work in this department, in addition to the training for public speaking, will include a systematic course of study in the art of expression and reading. The work is designed to be of practical value to the student, whatever his chosen occupation may be.

The old idea that training in elocution and dramatic art could be used to pecuniary and social advantage only by those who become public readers or actors, is fallacy. A systematic and thorough course in the art of expression will prove invaluable to any man or woman, for the one who knows, and at the same time is able to express what he knows in a pleasing and forceful manner, possesses a most satisfactory kind of education.

It is the aim of this department to stimulate and train the natural powers of expression of each pupil so that their work may bear the mark of individuality and the stamp of Truth. Expression comes from within. All work is based upon the thought, "We can give no more than we have, and we can express no more than we are." Hence an endeavor is made to arouse and stimulate the best there is in the pupil himself. Imitation, sham, artificiality, must be done away with, and a genuine tone be given to the work by cultivating the imaginative and emotional powers of the student by a careful analytical and



interpretative study of the best literature.

Co-ordinating with this work, aiming at the development and culture of the inner self, is a course in voice culture, vocal expression and gesture, consisting of drills and exercises designed to free all the agents of expressions so that they may be ready and willing servants of the will. Vocal training will endeavor to secure proper control of the breath, purity and flexibility of tone and tone color, and to detect and eradicate as far as possible voice defects.

Careful attention is given the development of self-possession in order that the speaker may be at his ease and appear at his best, that he may overcome self-consciousness and timidity when expressing himself. He who learns to speak clearly, pleasantly, quietly and calmly is learning to live quietly and pleasantly and calmly. "The poorest education that teaches self-control is better than the best that neglects it."

The following work is offered in elocution:

- 1 Elocution. Five recitations per week, first semester; elective in the sophomore year of the General Science Course.

Elementary lessons in vocal and bodily expression, including studies in emphasis, force, stress, quality, articulation, etc., exercises in breathing, voice culture, the simpler forms of gesture and fundamentals of pantomime.

Besides the technical work as outlined above, students will analyze and read selections from the best authors with the view of bringing themselves in close touch and sympathy with the feelings and emotions of the writers and at the same time leading them to give suitable and artistic expression to these thoughts and feelings.

- 2 Elocution. Five recitations per week, second semester; elective in the sophomore year of the General Science Course; prerequisite, Elocution 1.

During this semester special prominence will be given to bodily expression. Drills designed to give ease and grace of movement will be introduced. Pantomime and character study will become important features of the work. The work in voice culture will be a continuation of the work begun in Elocution 1, the object being to bring the voice under such perfect control that it will accurately reveal the mind's motive.

Analysis will have a place in the work done in this course, dealing with the various principles of literary interpretation, the cultivation of the imagination, intellectual conception, studies for the development of directness, simplicity, variety and naturalness.

- 
- 3 Elocution. Three recitations per week, first semester; elective in the junior year of the General Science Course; prerequisite, Elocution 2.  
Readings from Dickens, such as *David Copperfield*, *Tale of Two Cities*, *Nicholas Nickleby*, will form the basis for the work to be accomplished in this course, which is a practical application of the principles acquired during the first year's work. This work offers valuable hints in cutting and arranging stories suitable for public readings. Public speaking, extempore, oratory, etc., will receive attention.
- 4 Elocution. Three recitations per week, second semester; elective in the junior year of the General Science Course; prerequisite, Elocution 3.  
Shakesperian Reading. The work during this semester will be a continuation of Elocution 3.  
Readings, monologues, extempore, oratory, public speaking.
- 5 Public Speaking. One recitation per week, first semester; required in the junior year of the animal husbandry, the horticulture and the dairy groups, Agriculture Course; no prerequisite.  
This is designed to give practical training in public speaking without notes and without having memorized a formal address. It is the aim to lead the pupil to know what to say and how to say it, to make him a ready and easy speaker for all occasions.
- 6 Public Speaking. One recitation per week, second semester; required of the same classes as Elocution 5, of which it is a continuation; no prerequisite.
- 

## PHYSICAL CULTURE

The members of this class meet twice a week for work in physical culture. A course of healthful and invigorating gymnastics is given and pupils are encouraged to give daily attention to these exercises. The work in physical training is designed to cultivate grace and ease of movement, preserve the health and increase the strength of the body. The regular class work consists of exercises with the dumb-bells, Indian clubs, wands, fancy steps and rhythmic movements.

---

## Department of Military Science and Tactics

CAPTAIN GUYER.

The work in this department is under the guidance and

supervision of the War Department, which has prescribed in General Order No. 101, 1905, a minimum of 100 students in uniform, with three recitations weekly, and the U. S. Army-Officer, sent at the request of the college to conduct the work, shall give instruction as specified in said order.

This instruction is primarily destined to cover briefly the most important points and duties of a soldier's life, but the main object is to qualify students to be company officers of infantry in the U. S. Volunteers or Militia.

Many of the features of military training will prove of life long value in civil life.

All male students are divided into three groups:

Group 1—juniors and seniors.

Group 2—freshmen and sophomores.

Group 3—preparatory.

The students of group 1 will be required to take the course of lectures and will be examined on the subjects covered.

The students of groups 2 and 3 will be required to take the military course.

Juniors may elect to do further active work in the battalion of cadets as commissioned officers, if the character of their previous work warrants the appointment.

By direction of the Board of Regents students of all the groups may be required to turn out for unusual or great events, when directed by the Commandant and approved by the President.

Students classified for duty in the military department are organized into an infantry battalion of two companies and band.

Vacancies in the band are filled by the Commandant, detailing from the companies such men as are required. From the nature of band practice little time can be devoted by the band to necessary infantry drill and therefore as a rule no student will be transferred to the band who has not had at least three months' preparatory work in a company.

The appointment of officers and non-commissioned officers is made by the Commandant as approved by the President. These selections are based on natural ability, previous military record and competitive examination.

## DETAILS OF THE MILITARY COURSE.

## FIRST THREE MONTHS.

## Theoretical.

Nomenclature of the U. S. magazine rifle.  
General Orders for sentinels.

## Practical.

Infantry drill regulations through school of the company.  
The manual of arms.  
Butt's calisthenics.  
Two battalion inspections in full uniform.

## SECOND THREE MONTHS.

## Theoretical.

Recitations by officers and non-commissioned officers in drill regulations, 1st part.  
Firing regulations, ed. 1906, part 2, chapters 1, 2, 3, and 4.  
Army regulations, company administration, correspondence and courtesy and field service regulations.  
Lectures by the commandant on various military subjects.

## Practical.

Pointing and aiming drill.  
Gallery practice, and competition in marksmanship between the companies for the silver trophy.  
First aid to the injured.  
Military gymnastic exercises.  
Bayonet exercises.  
Ceremonies—guard mounting.  
Battalion drill, close order.

## THIRD THREE MONTHS.

## Theoretical.

Recitations by officers and non-commissioned officers in drill regulations, 2nd part.  
Guard manual.  
Service security and information; outposts, advance and rear guards.  
Patrols.

## Practical.

Company drill, close and extended order.  
Battalion drill, close and extended order.  
Company and battalion inspection.  
Battalion review.



Battalion parade.

Guard mounting with exchange of old for new guard.

Establishment of camp site with posting and relieving sentinels.

Advance and rear guards.

Outposts.

The three members of the battalion holding the highest standings for general excellence will upon graduation be reported to the Adjutant General of the State of South Dakota and to the Adjutant General of the U. S. Army, who will publish their names in the Army register.

### Preparatory

The work of this department is prerequisite to all full courses offered in the institution. The course as it is now arranged is the equivalent of the four years' high school course of the city schools, adopted by the High School Committee. It contains all the constants of that course, except the fourth year in English. Standings from the public schools of the state, at the direction of the Principal of the department, may be accepted and credit given for the same grade of work completed therein. The students of this department are under the supervision of an experienced member of the faculty, who superintends their work and strives to secure the forming of correct habits of life on the part of all.

Students will be admitted to this department upon completion of the eighth grade work in the public schools.

The Franklin Literary Society is composed of preparatory and short course students, or students of equal rank. This work is also under the supervision of the Principal of the department.

The following subjects are offered and are required for completion of the work:

### ENGLISH.

- 1 Composition. Five recitations per week, first semester.  
Choice of words, meaning of words, preferred usage according to best authorities.  
Text: Buehler's "Practical Exercises."
- 2 Composition. Five recitations per week, second semester; prerequisite, English 1.

Kinds of composition; study of description; paragraphing; narration; clearness; letter writing; choice of words; exposition and argument.

Text to be announced.

- 3 Composition and Rhetoric. Five recitations per week, first semester. This work affords the student practice in composition, an introductory knowledge of the principles of rhetoric, and an acquaintance with certain masterpieces of English literature. Herrick and Damon's Composition and Rhetoric for Schools is used as a text-book, Of the selected classics some are used for rapid reading, others for careful study in class.
- 4 Composition and Rhetoric. Five recitations per week, second semester.  
A continuation of English 3.
- 5 Composition and Literature. Five recitations per week, first semester.  
In this the work of the preceding year is continued. Selected English classics are read, and upon them the composition work is largely based. The history of American literature is also studied.
- 6 Composition and Literature. Five recitations per week, second semester.  
A continuation of English 5.

## LIBRARY.

With a view to facilitating the student's use of the library the following courses are given:

- 1 Library. One recitation per week, first semester.  
The use of indexes and abbreviations; the card catalogue; classification; use of dictionaries, and encyclopedias; the leading periodicals; periodical indexes.
- 2 Library. One recitation per week, second semester.  
The history and relative value of dictionaries and encyclopedias; special encyclopedias; other reference works; U. S. government publications.

## LATIN.

- 1 Latin. Five recitations per week, first semester.  
Primary principles of the language, including inflection and syntax with special attention to etymology, showing the relation of Latin stems to English words.

Text: "Bellum Helveticum."

- 2 Latin. Five recitations per week, second semester.  
Continuation of Latin 1. Bellum Helveticum completed.
- 3 Latin. Five recitations per week, first semester.  
Caesar, Books I, II and III.
- 4 Latin. Five recitations per week, second semester.  
Caesar, Book IV; Cicero, "Orations Against Cataline," I and II.

## HISTORY.

- 1 U. S. History. Five recitations per week, first semester; prerequisite, a knowledge of the history of the United States to the Colonial Period.  
A study of the conditions during the Colonial Period; Revolutionary War and War of 1812; industrial development of our country; the long struggle with slavery; the indestructibility of the Union; the economic struggle; the growth of the Northwest.  
Text to be announced.
- 2 Civics. Five recitations per week, second semester.  
General principles of government; branches of government; a close study of the constitution; comparison between the principles of the national government and that of our own state; principles of law; contracts in general.  
Text to be announced.
- 3 Greek History. Three recitations per week, first semester.  
History of Greece with brief preliminary survey of oriental history. The history of Greece and Rome is regarded as a study of the evolution of Greek and Roman institutions. Events are considered in their bearing on that evolution. A text-book is used, supplemented by other material.  
Text: West's "Ancient World."
- 4 Roman History. Three recitations per week, second semester.  
History of Rome with special emphasis upon the institutions of the empire. The work of this course includes the period of transition to the year 800 A. D.  
Text: West's "Ancient World."
- 5 English History. Three recitations per week, first semester.  
History of England to 1485. Emphasis upon constitutional points, and upon those institutions from which our own are derived. Text-book, lectures, papers and reports.  
Text: Cheyney's "Short History of England."

- 6 English History. Three recitations per week, second semester.  
Continuation of History 5. The Tudors and the Reformation; the Stuarts and Parliament; England under Parliamentary rule; the era of reform; democracy and empire.  
Text: Cheyney's "Short History of England."

## MATHEMATICS.

- 1 Arithmetic. Five recitations per week, first semester; prerequisite, a knowledge of Arithmetic to percentage.  
All the principles of percentage; involution; evolution; mensuration and the entire metric system.  
Text: Southworth-Stone's "Arithmetic," Part 3.
- 2 Algebra. Five recitations per week, second semester.  
Beginning with the fundamental notions.  
Text: Milne's "Academic Algebra."
- 3 Algebra. Five recitations per week, first semester.  
Continuation of Mathematics 2.
- 4 Algebra. Five recitations per week, second semester.  
Continuation of Mathematics 3. A general review of quadratics, the progressions, ratio and proportion, logarithms and such other important topics as the time will permit of taking up.
- 5 Plane Geometry. Four recitations per week, first semester; prerequisite, Mathematics 2.  
Beginning the subject.  
Text: Sander's "Plane and Solid Geometry."
- 6 Plane Geometry. Four recitations per week, second semester; prerequisite, Mathematics 3 and 5.  
Plane Geometry completed.

## PHYSICS.

- 1 Elementary Physics. Three recitations and two laboratory periods per week, first semester; prerequisite, Mathematics 2.  
Properties of matter, mechanics of solids, and mechanics of fluids; nature of light, intensity, velocity and reflection of light; laboratory work showing principal phenomena and proving laws governing them in properties of matter, mechanics of solids and mechanics of fluids; velocity of sound, color and reflection of light.  
Text: Carhart and Chute's "High School Physics;" Chute's "Practical Physics—Laboratory Manual."
- 2 Elementary Physics. Three recitations and two laboratory periods per week, second semester; prerequisite, Physics 1.



Refraction of light, heat, electricity and magnetism; laboratory work in heat, colorimetry, refraction of light, magnetism, static electricity, detection of electric current and its direction, induced currents and measurement of electrical resistances.

Texts: Carhart and Chute's "High School Physics;" Chute's "Practical Physics—Laboratory Manual."

### MECHANICAL ENGINEERING.

- 1 Carpentry and Wood Turning. Three laboratory periods per week, first semester.

Talks on the care and use of different tools. Practice at the bench in making the various joints used in wood construction.

- 2 Forging. Three laboratory periods per week, second semester.  
Bending, drawing, up-setting, welding and forging iron; steel manipulation, including cold chisels, punches and lathe and planer tools, tempering and hardening.

- 5 Mechanical Drawing. Three laboratory periods per week, second semester.

Instrumental drawing, geometrical problems and parts of machines. This work is offered during the entire year, and at hours convenient to teachers and students.

### ZOOLOGY.

- 1 Elementary Physiology. Four recitations and one laboratory period per week, first semester.

This is offered in the first year of the preparatory course and is designed to meet the requirements for High School physiology. It includes an elementary study of the human body, its physiology, hygiene, and sanitation.

Text: Hough & Sedgwick's "The Human Mechanism."

### NATURE STUDY.

- 1-2 Elementary Biology. Five recitation and laboratory periods per week, first and second semesters.

An elementary course dealing with the principles of biology. It will consist of lectures, recitations, and laboratory work. Text-book to be announced later.

### PHYSIOGRAPHY.

- 1 Three recitations per week, second semester.

The relation between the earth and the sun; rivers; weathering of soils; glaciers, their cause and action; land forms, their cause and

influence on man; volcanoes, the cause and effect; the atmosphere and its importance; the ocean; life on land and sea; how the physical conditions of the earth affect the life of man.

Text to be announced.

## ART.

- 1 Free Hand Drawing. Three laboratory periods per week, first semester.

Elementary Course. Drawing from simple casts in charcoal; theory of perspective; drawing in pencil. This work is arranged to be of direct assistance to students in their several courses in the college.

- 2 Free Hand Drawing. Three laboratory periods per week, second semester.

Charcoal drawing continued; clay-modelling from casts and objects; sketching in pencil and pen and ink.

## DOMESTIC ART.

- 1 Cooking. Three laboratory periods per week, first semester.

Designed for those who desire a knowledge of practical cookery. This course also includes instruction in care of the kitchen; serving and washing of dishes.

- 2 Sewing. Three laboratory periods per week, second semester.

This course aims to give students an understanding of the stitches and methods employed in plain sewing. Each student is required to make a suit of underwear. This course or its equivalent is a necessary prerequisite to any other course in needlework in the department.

Following is the scheme of preparatory work:

## PREPARATORY COURSE.

### FIRST YEAR.

#### First Semester—

Composition, a 5.....	English 1
Arithmetic, including Metric System, a 5.....	Mathematics 1
United States History, a 5.....	History 1
Free Hand Drawing, b 3.....	Art 1
Military, 3, or Physical Culture, 2.....	
Elective, 5.....	
Latin, a 5.....	Latin 1
Elementary Physiology, a 4, b 1.....	Zoology 1

## Second Semester—

Composition, a 5.....	English 2
Algebra, a 5.....	Mathematics 2
Civics, a 5.....	History 2
Military, 3, or Physical Culture, 2.....	
Elective, 6.....	
Latin, a 3, or.....	Latin 2
Physiography, a 3.....	Physiography 1
Free Hand Drawing, b 3, or.....	Art 2
Mechanical Drawing, b 3.....	Mechanical Engineering 5

## SECOND YEAR.

## First Semester—

Composition and Rhetoric, a 5.....	English 3
Algebra, a 5.....	Mathematics 3
Greek History, a 3.....	History 3
Military, 3, or Physical Culture, 2.....	
Elective, 8.....	
Latin, a 5, or.....	Latin 3
Elementary Biology, a 3, b 2.....	Entomology 1
Cooking, b 3, or.....	Domestic Art 1
Carpentry and Wood Turning, b 3.....	Mechanical Engineering 1

## Second Semester—

Composition and Rhetoric, a 5.....	English 4
Algebra, a 5.....	Mathematics 4
Roman History, a 3.....	History 4
Military, 3, or Physical Culture, 2.....	
Elective, 8.....	
Latin, a 5 or.....	Latin 4
Elementary Biology, a 2, b 3.....	Entomology 2
Forging, Iron and Steel, b 3, or.....	Mechanical Engineering 2
Sewing, b 3.....	Domestic Art 2

## THIRD YEAR.

## First Semester—

Composition and English Literature, a 5.....	English 5
Plane Geometry, a 4.....	Mathematics 5
Elementary Physics, a 3, b 2.....	Physics 1
English History, a 3.....	History 5
Library Course, a 1.....	Library 1
Military, 3, or Physical Culture, 2.....	

## Second Semester—

Composition and Literature, a 5.....	English 5
Plane Geometry, a 4.....	Mathematics 6
Elementary Physics, a 3, b 2.....	Physics 2
English History, a 3.....	History 6
Library Course, a 1.....	Library 2
Military, 3, or Physical Culture, 2.....	

### Department of Commercial Science

PROFESSOR CROSIER.

The commercial department occupies commodious quarters on the second floor of the Central Building. These rooms are exceptionally well suited to the work of the department, and supplied with folding desks, typewriters, offices for carrying on business transactions, such as banking and mercantile work.

This course, including both shorthand and business training subjects, extends through a period of three years, and when the student has satisfactorily completed the work as outlined, he will be given a certificate of graduation, which admits him to the freshman class of the college. The entrance requirements to this department are the same as for the Preparatory Course. Students will be allowed credit for equivalent work done elsewhere, thus enabling him the sooner to complete the work offered. Our aim is to give the specific training necessary, and as broad a general knowledge as possible, at all times endeavoring to do thoroughly the work in hand. No student will be certified to who fails to give us his best effort and has not attained a general average grade of eighty.

The expenses are the same as for any other work in the institution and far below what is usually charged for such instruction. College charges for the semester of eighteen weeks are eight dollars, which includes use of typewriter.

The work offered by the department is as follows:

#### FIRST YEAR.

#### FIRST SEMESTER.

- 1 Commercial Geography. Five recitations per week.



This course is designed to acquaint the student with those dominant features of industry which determine the quantity and quality of trade; to trace the various avenues of commerce and show the causes that give them direction and volume, thus enlarging the student's conception of the natural resources and the resultant economic movements which are brought specifically to bear upon every day life.

Text: Adam's "Commercial Geography."

2 Book-keeping. Three laboratory periods per week.

Single and double entry studied as in actual business; our aim being to acquaint the student in an elementary way with various systems of book-keeping, keeping constantly in mind accuracy and exactness, thus preparing him for the actual practice which is offered later in the year. Penmanship is required with this course.

Text: Benton's "High School Edition."

## SECOND SEMESTER.

3 Book-keeping. Three laboratory periods per week.

Each student will carry on regular transactions through six offices with the student body. While all transactions are of the same general nature, the results are different, thus creating in the individual student the habit of self reliance. All work must be of a certain degree of excellency before the next step can be taken. With this course cheques, drafts, notes, copying letters, writing deeds, mortgages, leases, insurance, etc., that would naturally attend same in actual business, are introduced.

## FIRST SEMESTER.

4 Shorthand. Five recitations per week.

Consonant stems, vowels, diphthongs, initial and final hooks and circles, word-signs, etc., in logical order; elimination of vocalization through position; the habit of co-ordination emphasized from the beginning; ordinary business letters introduced towards the close of the term.

Text: Graham's "Shorthand Book."

5 Typewriting. Five one-hour periods per week.

Graded exercises on the machine to learn key-board by the touch method; care of the machine; business letters, law forms, manifolding, mimeographing; department correspondence, speed practice, binding, folding and filing of all kinds of type-written matter. One hour each day.

Text: Any standard typewriting manual.

## SECOND SEMESTER.

## 6 Shorthand. Five recitations per week.

General dictation from Brown's Business Correspondence; Humphrey's Typewriting Manual. Law forms of all kinds, general literary selections. The aim of this term is to complete the student's preparation for actual work.

Texts: Music's "Universal Dictation;" Graham's "Amanuensis."

## 7 Typewriting. Five one-hour periods per week.

One hour each day. All work of this term to be from shorthand notes. The purpose of this is to give the student power to read notes readily and transcribe the same rapidly. It is especially desirable when practical for the student in shorthand to take typewriting at least two years, as the machine work shows really the finished product of the student's effort. One year is required of all students.

## THIRD YEAR.

## FIRST SEMESTER.

## 8 Elementary Law. Three recitations per week.

This subject is designed to acquaint the student somewhat with those fundamental principles underlying our specific law, thus enabling him to pursue more intelligently legal analysis. It is required in the freshman year of the Pharmacy Course.

Text: Robinson's "Elementary Law," with Blackstone and Walker's Law used as reference study.

## SECOND SEMESTER

## 9 Elementary Law. Three recitations per week.

A topical analysis of contracts; negotiable paper; agency; partnership and corporations; guaranty; sale of chattels; right of stoppage in transit; payment; law of tender; liens; interest and usury; contracts of affreightment; bailment; marine, fire and life insurance; probate matters and real estate conveyances. In connection with this outline a brief study is made of the South Dakota law having reference to these subjects, the student thus acquiring a general knowledge as well as specific application of same. The student is advised to purchase the Civil Code of South Dakota, or, if he does not desire to do this, a typewritten copy of the sections used will be furnished at actual cost.

Text: Townsend's "Topical Analysis of Commercial Law."

Following is the scheme of the course of study (for des-

cription of subjects not taught in this department and required in the course, see the Preparatory Course):

### Commercial Course

#### FIRST YEAR.

##### First Semester—

Composition, a 5.....	English 1
Arithmetic, including Metric System, a 5.....	Mathematics 1
Commercial Geography, a 5.....	Commercial Science 1
Bookkeeping, b 3.....	Commercial Science 2
Military, 3, or Physical Culture, 2.....	
Elective, 4.....	
Elementary Physiology, a 4, b 1.....	Zoology 1
Latin, a 5.....	Latin 1

##### Second Semester—

Composition, a 5.....	English 2
Algebra, a 5.....	Mathematics 2
Civics, a 5.....	History 2
Bookkeeping, b 3.....	Commercial Science 3
Military, 3, or Physical Culture, 2.....	
Elective, 3.....	
Physiography, a 3.....	Physiography 1
Latin, a 3.....	Latin 2

#### SECOND YEAR

##### First Semester—

Composition and Rhetoric, a 5.....	English 3
Algebra, a 5.....	Mathematics 3
Shorthand, a 5.....	Commercial Science 4
Typewriting, 5.....	Commercial Science 5
Military, 3, or Physical Culture, 2.....	
Elective, 5.....	
Latin, a 5, or.....	Latin 3
Elementary Biology, a 3, b 2.....	Entomology 1

##### Second Semester—

Composition and Rhetoric, a 5.....	English 4
Algebra, a 5.....	Mathematics 4
Shorthand, a 5.....	Commercial Science 6
Typewriting, 5.....	Commercial Science 7

---

Military, 3, or Physical Culture, 2.....	
Elective, 5.....	
Latin, a 5, or.....	Latin 4
Elementary Biology, a 2, b 3.....	Entomology 2

## THIRD YEAR.

## First Semester—

Composition and Literature, a 5.....	English 5
Plane Geometry, a 4.....	Mathematics 5
Elementary Physics, a 3, b 2.....	Physics 1
Elementary Law, a 3.....	Commercial Science 8
Library Course, a 1.....	Library 1
Military, 3, or Physical Culture, 2.....	

## Second Semester—

Composition and Literature, a 5.....	English 6
Plane Geometry, a 4.....	Mathematics 6
Elementary Physics, a 3, b 2.....	Physics 2
Elementary Law, a 3.....	Commercial Science 9
Library Course, a 1.....	Library 2
Military, 3, or Physical Culture, 2.....	

---

## School of Agriculture

In the great agricultural State of South Dakota there are numerous children whose homes are in districts where high school privileges are not available. To compensate, at least in some degree, for the lack of opportunities for secondary education in the rural districts, the Regents of Education have established the School of Agriculture in connection with the State College.

The School of Agriculture has for its specific purpose the instruction and training of young people for the life and work of the farm and home, for the social life of the rural community and for American citizenship.

The farmers' boys and girls are often needed on the farms and in the homes to help the parents during the busy seasons of the year. They can usually be spared from such work during the winter season, and may well spend this time in study which will prepare them for practical, profitable farming and successful home management.

The aim of the instructors in the School of Agriculture will



be to search out, with the students, the underlying principles of the objects and operations of the farm and household and to teach them application in successful practice. Heads, hands and hearts will be trained in unison.

### THE SUBJECTS OF INSTRUCTION.

While the subjects of study will consist primarily of those which relate to farming and household economy, they will include also such as are essential to a regular high school course. English and mathematics will receive due attention. History and civics will help to prepare the students for citizenship. Drawing and music will not be neglected. Botany, chemistry, physics and biology (including physiology and entomology) will be studied, especially in their relations to the farm and the home. The instruction will be largely technical. The technical topics will include studies in soils, plants and crops, domestic animals, foods, feeds and feeding, cooking, sewing laundering, farm and home management records and accounts, carpentry and blacksmithing. Text-books will be used when these aids best answer the purpose. Lectures will be given in the subjects which can be most efficiently taught in this way. Free use of object-lessons will be made. Demonstrations will be given in the class rooms, laboratories, barns, greenhouses, gardens, orchards, and fields.

The School of Agriculture will welcome earnest and worthy boys and girls from all parts of the state who have passed the eighth grade in the public schools and are willing to work in such a course of mental and manual training as will prepare them for life's labors.

### THE SCHOOL YEAR.

The season of schooling will be during the colder months of the year. The first term will begin November 3 and continue until Christmas time; the second term will open January 4 and continue until March 31.

The students of the School of Agriculture, after five months of study and training, will return to their homes for

seven months and apply in practice the principles and methods which they have studied.

The course will be completed in three years. The School of Agriculture will admit its first class of students in November 1908.

### COURSES OF STUDY.

Following are the schedules of the courses of study. The academic studies are practically the same for the men and women. The courses are differentiated only in such points as are related to their specific spheres in life's work.

#### Three Years' Course For Men

##### FIRST YEAR.

###### First Term—

English .....	a 4
Mathematics .....	a 4
Chemistry (Elementary) .....	a 2, b 1
Soil Formation and Management.....	a 1, b 1
Anatomy, Physiology and Hygiene.....	a 1, b 1
Agricultural Botany and Plant Propagation.....	b 2
Animal and Insect Life of Farm and Home.....	b 1
Dairy Husbandry.....	b 2
Poultry Culture.....	a 2
Carpentry .....	b 2
Music .....	2
Military Drill.....	3

###### Second Term—

English .....	a 4
Mathematics .....	a 4
Chemistry (Inorganic).....	a 1, b 2
Soil Formation and Management.....	a 1, b 1
Anatomy, Physiology and Hygiene.....	a 1, b 1
Horticulture (gardening).....	b 1
Agricultural Bacteriology .....	a 1, b 1
Dairy Husbandry.....	b 2
Poultry Culture.....	a 2, b 1
Blacksmithing .....	b 2
Music .....	2
Military Drill.....	3

## SECOND YEAR.

## First Term—

English .....	a 4
Algebra .....	a 4
Farm Accounts.....	a 1
Chemistry (Organic).....	a 3
Drawing (Free Hand).....	b 2
Agricultural Physics.....	a 1, b 2
Farm Crops.....	a 1, b 1
Horticulture (Fruit Growing).....	a 1, b 1
Breeding of Animals and Plants.....	a 2
Live Stock Judging.....	a 2
Forge Work.....	b 2
Music .....	2
Military Drill.....	3

## Second Term—

English .....	a 4
Algebra .....	a 4
Farm Accounts and Records.....	a 1
Drawing (Optional).....	b 2
Animal Nutrition.....	a 5
Agricultural Physics.....	a 1, b 2
Farm Crops.....	a 1, b 1
Horticulture (Fruit Growing).....	a 1, b 1
Physiography .....	a 1, b 1
Live Stock Judging.....	a 2
Forge Work.....	b 2

## THIRD YEAR.

## First Term—

English .....	a 4
Geometry (Plane).....	a 4
History and Civics.....	
Feeding Live Stock.....	a 3
Farm Motors and Machines.....	a 1, b 1
Farm Manufacturing.....	b 1
Farm Management.....	a 1
Forestry .....	a 1
Veterinary (Prevention of Animal Diseases).....	2
Dressing and Curing of Meats.....	a 1
Thesis .....	
Music .....	
Military Drill .....	

## Second Term—

English .....	a 4
Geometry .....	a 4
Feeding Live Stock.....	a 2
Farm Motors and Machines.....	a 1, b 1
Farm Manufacturing .....	b 1
Judging Live Stock.....	b 2
Forestry .....	a 1
Dressing and Curing of Meats.....	a 1
Veterinary, (Prevention of Animal Diseases).....	a 1
Thesis .....	
Music .....	
Military Drill .....	

## Three Years' Course For Women

## FIRST YEAR.

## First Term—

English .....	a 4
Mathematics .....	a 4
Chemistry (Elementary) .....	a 2, b 1
Anatomy, Physiology and Hygiene.....	a 2, b 1
Agricultural Botany and Plant Propagation.....	b 2
Birds and Insects of farm and home.....	a 1
Dairying .....	b 1
Poultry Culture .....	a 2
Cooking (Elementary) .....	b 3
Sewing (Elementary) .....	b 2
Music .....	
Physical Culture .....	

## Second Term—

English .....	a 4
Mathematics .....	a 4
Chemistry (Inorganic) .....	a 1, b 2
Anatomy, Physiology, Hygiene.....	a 1, b 1
Gardening .....	b 1
Household Bacteria and Sanitation.....	a 1, b 1
Poultry Culture .....	a 2, b 1
Cooking, serving .....	b 3
Sewing .....	b 2
Music .....	
Physical Culture .....	



## SECOND YEAR.

## —First Term—

English .....	a 4
Algebra .....	a 4
Chemistry (Elementary Organic).....	a 3
Home Accounts .....	a 1
Elements of Physics.....	a 1, b 2
Laundering .....	b 1
Drawing (Freehand) .....	b 2
Cooking .....	b 3
Sewing .....	b 2
Music .....	
Physical Culture .....	

## Second Term—

English .....	a 4
Algebra .....	a 4
Physiography .....	a 1, b 1
Drawing & water color painting (optional).....	b 2
Human Nutrition .....	a 5
Dietetics .....	b 2
Sewing .....	b 2
Music (optional) .....	
Physical Culture .....	

## THIRD YEAR.

## First Term—

English .....	a 4
Geometry .....	a 4
History and Civics.....	a 4
Care and feeding of Children and Infants.....	a 3
Marketing, Planning menus and serving.....	b 3
Home Decoration .....	a 1
Music .....	
Physical Culture .....	
Theme .....	

## Second Term—

English .....	a 4
Geometry .....	a 4
Home management .....	a 5
Invalid Cookery .....	b 2

Home Nursing (Emergencies).....	b 2
Home Buildings, Labor Saving Devices.....	b 2
Music .....	
Physical Culture .....	
Theme .....	

---

## SHORT INDUSTRIAL COURSES

Special work is offered in the various industrial departments for the benefit of those who can not avail themselves of the opportunities offered in the longer courses. These short courses are becoming a very attractive and profitable feature in the lives of many who can get away from their homes only at the time of the year when the work is offered, and persons of all ages, young and old, are found working side by side in these classes, to improve the conditions of their lives in the home and on the farm. A special effort is put forth to make the work interesting and specialists from other institutions are often engaged to assist in the instruction.

Since much of this work is adapted to the needs of the persons enrolled for it, the courses can not be very fully described here. For a more detailed description of any particular work, address inquiries to the department concerned or to the President of the College.

The different courses are mentioned below:

### Two Weeks' Course in Poultry Husbandry and Agriculture

Lectures on poultry, corn judging, stock judging etc. The work begins January 4 and ends January 15.

---

### Six Weeks' Course in Agriculture

This course will cover a period of six weeks beginning January 4 and ending February 12 and there will be no entrance examination required. The work will consist of lectures, recitations, demonstrations and practical laboratory exercises in the following subjects: stock judging, poultry culture, farm methods and implements, crop rotation, corn judging, seed selection

and breeding, diseases of domestic animals and their treatment, insects injurious to farm crops and the elements of horticulture, including the cultivation and propagation of vegetables, fruits, trees and shrubs.

---

### Three Months Course in Horticulture

This work will begin January 4 and close April 2.

Special commercial Nursery Course. Lectures and practical work in commercial propagation and nursery management of fruit trees and small fruits, forest trees, ornamental trees, shrubs and plants, grafting, budding, pruning, cutting scions, packing grafts, making cuttings and stratifying seeds. All of every day.

Lectures; *American Horticultural Manual*, *Bailey's Nursery Book*, *Goff's Principles of Plant Culture*, *Green's Amateur Fruit Growing and Forestry in Minnesota*.

---

### The Two Weeks' Winter Dairy Course

This course is offered to meet the demands of those experienced creamery and cheese-factory operators who cannot spare the time to take a more extended dairy course. The rapid progress and profitable application of scientific principles to the dairy industry makes it important that every cheese and butter-maker take at least a short course in dairying.

The chief factors influencing the successful operation of factories will be considered in this course, such as the best methods of handling hand-separator cream; the control of overrun; the preparation and use of starters; the testing of milk and cream for fat and adulteration; the management of creameries and cheese-factories.

Special instructors and lecturers will be employed during this course.

The work is as follows:

Fourteen lectures on buttermaking and creamery management.

Seven lectures on dairy machinery, boilers and engines.

Seven lectures on dairy business methods.

Seven lectures on dairy bacteriology.  
In addition special lecturers.

### One Year Dairy Course

Applications are constantly received for men qualified to operate creameries, cheese-factories, and dairy farms at salaries ranging from \$50 to \$135 per month. The One Year Dairy Course has been outlined to train men to fill such positions and also to aid them to operate dairy farms and factories more profitably for themselves.

Enough of the fundamental subjects have been included in the course to give an opportunity for review work. Special emphasis is given to practical dairy and creamery work.

The first semester, beginning September 16 and ending January 29, will be devoted principally to the successful operation of creameries. In the second semester beginning February 1 and ending June 9, emphasis will be given to cheesemaking.

Students satisfactorily completing this course will receive dairy certificates.

Forenoons are devoted to practical work in college factory which is in daily operation.

The course is as follows:

#### FIRST SEMESTER.

Arithmetic .....	5 hours
Factory Buttermaking .....	3 hours
Testing Milk and Its Products.....	2 hours
Dairy Bacteriology .....	1 hour
Veterinary Medicines .....	2 hours

#### SECOND SEMESTER.

Arithmetic .....	5 hours
Dairy Bookkeeping .....	3 hours
Agronomy .....	3 hours
Factory Cheesemaking .....	1 hour
Dairy Farm Management.....	1 hour



Short Course in Steam Engineering

Modern agricultural methods have introduced in such a marked degree the steam engine as a substitute for animal power that the consequent growing demand for steam engineers has led the College to arrange a two-term course of study for the special training of steam (especially traction) engineers. Extreme care has been taken only to offer such work as shall prove valuable to the man running the traction engine, or other machinery. A relatively large amount of shop work, engine repairing and engine running is introduced, with a proper proportion of recitations in closely allied subjects. Upon the satisfactory completion of this work the student is given a certificate which is virtually the same as a license in this state to run an engine.

Students who desire to take this course are expected to pass satisfactory examinations in arithmetic as far as the preparatory class carries that subject in the fall. Also to read intelligently and show such general elementary training as shall indicate that they are able to understand the subjects embraced in the engineering course.

The winter term begins January 4, and the spring term March 23. The work is as follows:

WINTER TERM.

Arithmetic .....	a 5
Physics of Steam.....	a 5
Civil Government .....	a 5
Forging .....	b 3
Mechanical Drawing .....	b 2

SPRING TERM.

Algebra .....	a 5
Steam Engine Lectures.....	a 5
Elementary Physics .....	a 5
Forging .....	b 2
Mechanical Drawing .....	b 3
Engine Practice .....	b 5

---

**Student Organizations****INDUSTRIAL COLLEGIAN.**

Mary Wright .....	Editor-in-Chief
Clifford Johnson .....	Business Manager

**ATHLETIC ASSOCIATION.**

John Furnstahl .....	President
Frank Sperb .....	Secretary
Percy Huntimer .....	Treasurer
Ralph Chilcott ..	President State Inter-Collegiate Athletic Assn.

**ORATORICAL ASSOCIATION.**

W. R. Cooley .....	President
Florence West .....	Secretary

**BAND.**

Francis J. Haynes.....	Leader
------------------------	--------

**YOUNG MEN'S CHRISTIAN ASSOCIATION.**

George C. Phillips .....	President
Henry Erdmann .....	Secretary

**YOUNG WOMEN'S CHRISTIAN ASSOCIATION.**

Amy Ladd .....	President
Frances Davison .....	Secretary

**ATHENIAN LITERARY SOCIETY.**

Carl Vernlund .....	President
Ethel Lawrence .....	Secretary

**MILTONIAN LITERARY SOCIETY.**

Robert S. Watson .....	President
Elmer Sexauer .....	Secretary

## FRANKLIN LITERARY SOCIETY.

Morris Jerlow .....	President
Cora Cook .....	Secretary

## ART CLUB.

Ruth Pierce .....	President
James P. Murphy .....	Secretary

## CIVIL ENGINEERS' CLUB.

Ralph McKeown .....	President
Charles Johnson .....	Secretary

## LADIES' GLEE CLUB.

Francis J. Haynes .....	Conductor
-------------------------	-----------

## COLLEGE GLEE CLUB.

Francis J. Haynes .....	Conductor
-------------------------	-----------

## AGRICULTURAL CLUB.

Clifford Johnson .....	President
Jacob Wickre .....	Secretary

## ELECTRICAL ENGINEERING CLUB.

Edwin Griffith .....	President
Gordon Weeks .....	Secretary

## Battalion Roster

## FIELD AND STAFF.

Major .....	Lindsey Whitehead
Adjutant .....	John P. Furnstahl
Quartermaster .....	James P. Murphy

## NON-COMMISSIONED STAFF.

Sergeant Major .....	Geo. B. Atwood
----------------------	----------------

Chief Trumpeter ..... Claude McCoy

## COMPANY "A."

Captain ..... Robert D. Jones  
 1st Lieutenant ..... Ray Fridley  
 2nd Lieutenant ..... Fred Matheny  
 1st Sergeant ..... Neil Stacey  
 Q. M. Sergeant ..... Harvey Thornber  
 Sergeant ..... Ervie Buck  
 Sergeant ..... Clifford D. Johnson  
 Sergeant ..... Edwin B. Grotta  
 Sergeant ..... Volmar Finley  
 Corporal ..... Percy Huntimer  
 Corporal ..... Charles Johnson  
 Corporal ..... Richard Fridley.  
 Corporal ..... Andrew Palm  
 Corporal ..... Andrew Kilpatrick  
 Musician ..... Edwin Koch  
 Musician ..... Chris. Bergsvik

## COMPANY "B."

Captain ..... Robert S. Watson  
 1st Lieutenant ..... Fay Atkinson  
 2nd Lieutenant ..... Walter Fickle  
 1st Sergeant ..... Joe Morrison  
 Q. M. Sergeant ..... Elmer Lothrop  
 Sergeant ..... John Tyler  
 Sergeant ..... Harold Crothers  
 Sergeant ..... John Balmat  
 Corporal ..... Allyn Parsons  
 Corporal ..... Lynn Matheson  
 Corporal ..... Clifton Doughty  
 Corporal ..... Orville McMillan  
 Musician ..... Arthur Bacon



## COLLEGE ALUMNI.

### ALUMNI ASSOCIATION.

Shirley P. Miller, '03.....	President
John Nelson, '05.....	First Vice President
Fred A. Collier, '06.....	Second Vice President
Winifred Enos, '01.....	Third Vice President
Hubert B. Mathews, '92.....	Secretary and Treasurer

---

### Graduates.

#### CLASS OF 1886.

##### BACHELOR OF SCIENCE.

Saylor, Marcus A., Prof. of Mining & Irrigation Eng., New Mexico  
School Mines, Socorro.

#### CLASS OF 1888.

##### BACHELOR OF SCIENCE.

Aldrich, John M.....Prof. of Biology, U. of Idaho, Moscow, Idaho  
Hewes, Lulah, (Wellman).....Mayville, N. Y.  
Lawrence, Phillip A.....Attorney, Brookings

#### CLASS OF 1889.

##### MASTER OF SCIENCE.

McKenney, Dustin W., Principal C. M. Schwab Manual Training School,  
Homestead, Pa.

##### BACHELOR OF SCIENCE.

\*Aldrich, Ellen (Roe).....Died, Dec. 8th, 1897, at Helena, Mont.  
\*Allen, William C.....  
Arnold, Katie (Boswell).....Estelline  
Brooke, Grace (Lawshe).....College Preceptress, Fargo, N. D.  
Crane, May (Cranston).....Spokane, Wash.  
Cross, Alvah G.....  
Cunningham, Sarah (Haber).....Spokane, Wash.  
\*Deceased.

---

Eno, Durell G.....	Farmer, Platte
Grady, Francis A.....	Attorney, Red Lake Falls, Minn.
Korstad, Hans.....	Farmer, Brookings
Larson, Lars K.....	Bank Cashier, Dell Rapids
McKenney, Dustin W., C. M. Schwab Manual Training School, Homestead Pa.	
McLouth, Lewis C.....	Manufacturer, Detroit, Mich.
Mork, Albert A.....	Farmer, Des Lacs, N. Dak.
Oreutt, Carrie (Ross).....	Northfield, Minn.
Rogers, Edmund.....	Machinist, Milwaukee, Wis.
Ross, Abbie E.....	Missionary, San Francisco, Cal.

## CLASS OF 1890.

## BACHELOR OF SCIENCE.

Day, John M.....	Teacher, Mellette
Egeberg, Hildus.....	Farmer, Brookings
Haaasarud, Ole H.....	Farmer, Rushford, Minn.
Harkins, Lilla A., Prof. of Dom. Science, Montana Agricultural College, Bozeman.	
Hopkins, Cyril G., Prof. of Agronomy, Chemist, and Vice Director of U. S. Experiment Station, U. of Illinois, Champaign.	
Irish, Maggie (Duffey).....	St. Louis, Mo.
Jenkins, John C.....	Attorney, Brookings
Kenyon, Arthur H.....	Lawyer, Spokane, Wash.
Pyne, Estel W.....	Sec. and Treas. Pyne Music Co., Santa Anna, Cal.
Roe, Guy W.....	Sup't. Union Fibre Co., Winona, Minn.
Stoner, Minnie A., Prof. of Domestic Science, University of Ohio, Columbus.	
Wardall, Norman M.....	Real Estate & City Clerk, Huron

## CLASS OF 1891.

## MASTER OF SCIENCE.

Aldrich, John M.....	Prof. Entom., U. Idaho, Moscow, Idaho
Wolgemuth, Lee F., Mechanical Engineer, C. St. P., M. and O. Ry., St. Paul.	

## CLASS OF 1891.

## BACHELOR OF SCIENCE.

Aldrich, Irwin D.....	Editor & Sec. Regents of Education, Big Stone
Bacon, Nora (Updyke).....	Pueblo, Col.
Bell, William D.....	Editor, St. James, Minn.
Bentley, Wm. S.....	Physician Soldiers' Home, Hot Springs

---

Crane, Austin B.....	Civil Eng., Spokane
Davis, Homer.....	Physician, Genoa, Neb.
Dillon, Willis C.....	Attorney, Omaha, Neb.
Dibble, Hettie (Doughty).....	Clark
Fourt, Fanny (Shannon).....	Fairfield, Ia.
Haberlein, Alice (Robinson).....	Aguas Calientes, Mex.
Hann, Jay B.....	Photographer, Bellingham, Wash.
Houston, Grant.....	Physician, Joliet, Ill.
Irish, Henry C.....	Sup't. Mo., Botanical Gardens, St. Louis
Lewis, Perry.....	Tinner, Mankato, Minn.
Millett, Mary (Frick).....	Rochester, Minn.
Solberg, Halvor C.....	Prof. Steam & Mechanical Eng., S. D. S. C.
Spooner, Jennie (Chamberlain).....	Physician, South Haven, Michigan
Valleau, Vinal B., Sec. to General Manager American Express Co., Chicago	
West, Hugh H.....	Physician, Elgin, Ill.
Wolgemuth, Lee F.....	Mechanical Engineer, Chicago, Ill.

## CLASS OF 1892.

## BACHELOR OF SCIENCE.

Austin, Steven E.....	Machinist, Iowa
Davis, Samuel H.....	Farmer, Plankinton
Griffiths, David.....	Ass't. Agrostologist, Agr. Dep't., Wash.
Hamlin, John R., Jr.....	R. R. Station Agent, Pima, Ariz.
Harding, Albert S.....	Prof. of History & Political Science, S. D. S. C.
Hatfield, Ira H.....	Attorney, Lincoln, Neb.
Keeney, Emma H.....	Physician, Albert Lea, Minn.
Madden, Margaret.....	Brookings
Mathews, Eva (Plocker).....	Brookings
Mathews, Hubert B.....	Prof. of Physics & Elec. Eng., S. D. S. C.
McAndrew, James E.....	Farmer, Iroquois
*McLouth, Ida B.....	Died, Aug. 27, 1899, at Short Beach, Conn.
Schlosser, Thomas F.....	Clergyman, Almira, Wash.
Torrence, Nettie (Sloan).....	Redlands, Cal.
Whitten, John C.....	Prof. of Hort., U. of Missouri, Columbia
Williams, Effie (Snell).....	Florist, Memphis, Neb.
Winegar, Albert J.....	Draughtsman, Fairbanks Morse Co., Beloit, Wis.

## CLASS OF 1893.

## BACHELOR OF SCIENCE.

Bates, Edmund T.....	Farmer, Onslow, Ia.
Beck, Milton.....	Chief Engineer, Alamo Mfg. Co., Hillsdale, Mich.
Edgerton, Wm. M.....	Physician, Faulkton
McLouth, Benjamin F.....	Insurance, Hartford, Conn.

Robertson, Ada N.....Teacher, East Helena, Mont.  
 Robertson, Clarence H..Science Teacher and Missionary, Nan King, China  
 Schoppe, W. J. A.....Observer U. S. Weather Bureau, Iola, Kansas

## CLASS OF 1894.

## MASTER OF SCIENCE.

Mathews, Eva (Plocker).....Brookings

## BACHELOR OF SCIENCE.

Brown, Cyrus O.....Attorney, Burwell, Neb.  
 Brown, James A.....Attorney, Lincoln, Neb.  
 Hopkins, Mrs. C. G.....Champaign, Ill.  
 Knox, Elinor (Williams).....Washington, D. C.  
 Luke, Fred K.....Farmer, Kalispell, Mont.  
 Spooner, Fannie (Parker).....Montana  
 Sproul, Alex H., Head of Com'l. Dep't., Shortridge High School, Indian-  
 apolis, Ind.  
 Tanzy, Hattie (Dibble).....Canton  
 \*Tanzy, Marvin F.....Died Feb. 8, 1900, at Canton, S. D.  
 Waters, Geo. D.....Traveling Salesman, Madison  
 Young, Gilbert A., Ass't Prof. of Mech. Eng., Purdue Univ., LaFayette,  
 Ind.

## CLASS OF 1895.

## MASTER OF SCIENCE.

Schoppe, W. J. A..Observer, United States Weather Bureau, Iola, Kansas  
 Sproul, Alex H., Head of Commercial Dep't., Shortridge H. S., Indian-  
 apolis, Ind.

## BACHELOR OF SCIENCE.

Brown, Sara.....Teacher, Sherman City, Ia.  
 Cornell, Harry M.....Cashier, Russell, N. D.  
 Merriek, Mable (Mayland).....Severance, Kan.  
 Moore, Anna (Parker).....Brookings  
 Robertson, Edith (Salisbury).....Nan King, China  
 Sevy, Isaac B.....Clergyman, Tyndall  
 Sproul, Wm. T., Sec. & Treas., Ingersoll Milling Machine Co., Rock  
 ford, Ill.  
 Thornber, John J.....Prof. of Botany, U. of Arizona, Tucson  
 Wilcox, Ernest N.....Farmer, Thawville, Ill

## PHARMACY GRADUATES.

Briggs, Elmer E.....Farmer, Muscoda, Wis



---

Knox, Wm. H.....	Orange Grower, Fresno, Cal.
Lentz, Elmer A.....	Dentist, Brookings
*Murphy, Wm.....	
Whitehead, B. T.....	Prof. Pharmacy, S. D. S. C.

## CLASS OF 1896.

## MASTER OF SCIENCE.

Brown, James A.....	Attorney, Lincoln, Neb.
Luke, Fred K.....	Farmer, Kalispell, Mont.
Robertson, Ada N.....	Teacher, East Helena, Mont.
Williams, Effie (Snell).....	Florist, Memphis, Neb.
Wilcox, Ernest W.....	Farmer, Thawville, Ill.

## BACHELOR OF SCIENCE.

Allison, Wm. F....	Prof. Civil Eng., Colorado School of Mines, Golden, Col.
Atkinson, Jesse C.....	Civil Engineer, Chicago, Ill.
Brown, Ida (Dibble).....	Lincoln, Neb.
Carter, Louis W.....	Farmer, Highmore
Downing, Jennie C.....	Rathdrum, Idaho
Grattan, Paul H.....	Collector, Elkton
Hegeman, Harry A.....	First Lieutenant 19th Infantry, U. S. A.
Holm, Andrew B.....	Photographer, Brookings
Hoy, Nora (Mathews).....	Brookings
Hoy, Howard H.....	Ass't in Phys. and El. Eng., S. D. S. C.
Korstad, Mary.....	Missionary, Brookings
Lusk, Willard C.....	Editor, Yankton
Sasse, Ernest G.....	Physician, Lidgerwood, N. D.
Smith, Alta (Mathews).....	Las Vegas, Nev.
Williamson, Albert.....	Editor, Oacoma

## PHARMACY GRADUATES.

Cotter, J. C.....	Farmer, Dell Rapids
Grove, Eugene.....	Physician, Hetland
Moore, Thomas.....	Druggist, Sioux Falls
Palmer, Horton.....	Druggist, White
Sherwin, Frank.....	Banker, Phillips

## CLASS OF 1897.

## MASTER OF SCIENCE.

Davis, Homer.....	Physician, Genoa, Neb.
-------------------	------------------------

## BACHELOR OF SCIENCE.

Ainsworth, Cephas B.....	Deputy Treasurer, Aberdeen
--------------------------	----------------------------

---

Atkinson, Geo.....	Contractor, Springfield
Atkinson, Walter.....	Civil Engineer, Chicago, Ill.
Boyden, Frank E.....	Physician and Surgeon, Brookings
Bullen, Grace (Young).....	Brookings
Clevenger, John W.....	Dentist, Chamberlain
Crowley, Cassie (Madden).....	Fargo, N. D.
Harding, Neva (Whaley).....	Brookings
Hazel, Wm. A.....	Real Estate, Aberdeen
*Husted, Harley H.....	Died 1907, at Lincoln, Neb.
Jolley, Wm. G.....	Principal of Schools, Castlewood
Olson, Eva.....	Preceptress, Grand Forks, N. D.
Parsons, Thomas S.....	Science Teacher, Durango, Col.
Rensburg, Alice (Wilcox).....	Thawville, Ill.
Roe, Robert.....	Stockman, Highmore
Saylor, Christie (Hargis).....	Elmo, Mo.
Sevy, Orpha (West).....	Tyndall
Shuster, John W.....	Ass't Prof. Elec. Eng., U. of Wis., Madison
Thornber, Walter S.....	Prof. of Hort., State College, Pullman, Wash.
Walters, Wm. H.....	Grain Buyer, Bruce
Whitehead, Bower T.....	Prof. of Pharmacy, S. D. S. C.
Work, Lloyd E.....	Advertising Man with Chicago Inter-Ocean, Chicago, Ill.

## CLASS OF 1898.

## MASTER OF SCIENCE.

Harkins, Lilla A., Prof. Domestic Science, Montana Agr. College, Boze- man, Mont.
Parsons, Thomas S.....Science Teacher, Durango, Col.

## BACHELOR OF SCIENCE.

Adams, Edith (Riemann).....	Antwerp, Belgium
Ainsworth, Howard.....	Street Car Con., Chicago, Ill.
Allison, Mabel (Hegeman).....	Golden, Col.
Beck, Louis..	Gasoline Engine Expert, Fairbanks Morse Co., Beloit, Wis.
Bolles, Myrick N.....	Mining and Metallurgical Engineer, Monterey, Mex.
Boyden, Maude (Hegeman).....	Brookings
Crane, Elsie (Curtiss).....	Brookings
Crane, Margaret (Davidson).....	Spokane, Wash.
Fjerstad, Hans C.....	Grocer, Sioux Falls
Harding, Charles J.....	Teacher, Brookings
Hazel, Flora (Ainsworth).....	Aberdeen
Hodgeson, Herbert H.....	U. S. Geol. Survey, Wash., D. C.
Knox, Wm. H.....	Orange Grower, Fresno, Cal.
Lawrence, Claude W., Inst'r in Agronomy and Cerealists of the Experi- ment Station, State College, Pullman, Wash.	
Lawrence, Clay.....	Lawyer, Seattle, Wash.

---

Paddock, Jay M.....	Farmer, Aurora
Thornber, Wm. T.....	Farmer, Dell Rapids
Towne, Addie (Loveland).....	Duluth, Minn.
Towne, Judson R.....	Electrician, Duluth, Minn.
White, Alice (Barton).....	Brookings

## PHARMACY GRADUATES.

Beebe, Jay L.....	Physician, Anaheim, Cal.
Clevenger, J. W.....	Dentist, Chamberlain
Holsey, Joseph.....	Druggist, Veblen
Lee, Berton.....	Druggist, Toronto

## CLASS OF 1899.

## MASTER OF SCIENCE.

Mathews, Hubert B.....	Prof. of Phys. and El. Eng., S. D. S. C.
Tanzy, Hattie (Dibble).....	Canton
Thornber, Walter S....	Prof. of Hort., Washington Ag'l College, Pullman
Whitten, John C.....	Professor of Horticulture, U. Missouri, Columbia

## BACHELOR OF SCIENCE.

Findeis, Phillip.....	Lumber Merchant, Miranda
Lawrence, Mary M.....	Teacher, Exa, Wash.
Lawrence, Wm. H., In. in Botany and Ass't Botanist in Ex. Station, State College, Pullman	
Mason, Nellie (Mason).....	Albia, Ia.
Nachtigal, Isaac.....	County Sup't, Parker
Nelson, Ina (Colgrove).....	Brookings
Walters, Edith.....	Merchant, Bruce
West, George.....	Physician, Marengo, Ia.

## PHARMACY GRADUATES.

Carr, George.....	Farmer, Flandreau
Crowley, D. C.....	Insurance Agent, Fargo, N. D.
Hepner, Frank.....	Ass't Station Chemist, U. of Wyoming, Laramie
Kendall, Clint D.....	Druggist, Brookings
Lindsey, Charles.....	Stockman, Midland
Oulton, Frank.....	Real Estate, Faulkton
Shriver, E. M.....	Druggist, Elkton
Taylor, C. DeWitt.....	Drug Clerk, Denver, Col.

## CLASS OF 1900.

## BACHELOR OF SCIENCE.

Allen, Hart M.....	Druggist, Oakland, Cal.
--------------------	-------------------------

---

*Anderson, Clark W.....	Died, March 6th, 1902, at Brookings
Beebe, Jay L.....	Physician, Anaheim, Cal.
Carlson, Ella.....	Teacher, St. Paul, Minn.
Carlson, Esther.....	Teacher, St. Paul, Minn.
Davies, Mary, Inst. History and Literature, Falls City High School, Falls City, Neb.	
DeLa, John W.....	Editor, Balfour, N. D.
Doughty, Mathew W.....	Civil Engineer, Scranton, Pa.
Grove, Frank W.....	Dentist, Wausa, Neb.
Harza, Carl.....	Electrician, Detroit, Mich.
Hodgeson, Gustava (Olson).....	Washington, D. C.
Kendall, Clinton D.....	Druggist, Brookings
Lawrence, Jessie.....	Inst. in High School, Snohomish, Wash.
Mathews, Alice M.....	Teacher, White
Mathews, Roscoe A. Civil Engineer, Geological Survey, Great Falls, Mont.	
Morrison, Freda C.....	Teacher, Canistota
Olson, Callie (Williams).....	Brookings
Sherwin, Sara (Davies).....	New York, N. Y.

## PHARMACY GRADUATES.

Bentley, Wm. S.....	Physician, Soldiers' Home, Hot Springs
Brosseau, Jesse E.....	Physician, Chicago, Ill.
Baldwin, Corwin B.....	Drug Clerk, Rapid City
Connell, John C.....	Druggist, Luverne
Else, Earl.....	House Physician, Cook County Hospital, Chicago, Ill.
*Eckert, Henry.....	
George, William.....	Physician, Evarts
Hart, Bertrand.....	Physician, Blunt
Jones, Robert.....	Druggist, Madison
West, Hugh H.....	Physician, Elgin, Ill.

## CLASS OF 1901.

## MASTER OF SCIENCE.

Knox, Wm. H.....	Orange Grower, Fresno, Cal.
Whitehead, Bower T.....	Professor of Pharmacy, S. D. S. C.

## BACHELOR OF SCIENCE.

Bagley, Susie.....	Teacher, Chicago, Ill.
Bolles, Laura Jane.....	Teacher, Colman
Boyd, Mary.....	Teacher, Brookings
Brosseau, Jesse E.....	Medical Student, Chicago, Ill.
Culhane, Michael E.....	Lawyer, Brookings
Davies, Autumn.....	History Student, Lincoln, Neb.
Dodge, Fred E.....	Hotel Keeper, Redfield



Else, Earl.....	House Physician, Cook County Hospital, Chicago, Ill.
Enos, Winifred.....	Teacher, Brookings
Erickson, Martin L.....	
Fishback, Myra.....	Brookings
Harza, LeRoy F.....	Student Civil Eng., Madison, Wis.
Kendall, Leonard J.....	Telegraph Operator, Brookings
Kennedy, C. LeRoy.....	Bank Clerk, Madison
Langdon, Lillian, Instructor in Stenography, Sioux Falls Business College, Sioux Falls	
Lee, Rhoda (Johnson).....	Toronto, S. D.
McElmurry, Loretta.....	Teacher, Brookings
Mork, Theodore.....	Farmer, Des Laes, N. D.
Phillips, Florence.....	Teacher, Brookings
Phillips, C. Louise.....	Assistant Librarian, S. D. S. C.
Roskie, Lina (Evans).....	Madison
Hatton, John Henry.....	Division of Forestry, Dep't of Ag'l, Washington

## PHARMACY GRADUATES.

Cornell, Edward.....	Drug Clerk, Huron
Tidball, Clyde.....	Drug Clerk, Brookings

## CLASS OF 1902. -

## MASTER OF SCIENCE.

Hepner, Frank E....	Ass't Station Chemist, U. of Wyoming, Laramie, Wyo.
---------------------	---

## BACHELOR OF SCIENCE.

Cuckow, Edith (Thorner).....	Elkton
Fleming, Michael.....	Postal Clerk, St. Paul, Minn.
George, William A.....	Physician, Everts
Hart, Bertrand M.....	Physician, Blunt
Hepner, Frank E.....	Ass't Station Chemist, Univ. of Wyoming, Laramie
Johnson, Clara (Johnson).....	Jamestown, N. D.
*Johnson, Edward .....	
Kephart, George .....	Teacher
Lee, Berton E.....	Drug Clerk, Arlington
Ramsey, Henry J....	Ass't in Plant Pathology, Univ. of Cal., Berkley, Cal.
Roskie, George W.....	Abstractor, Madison
Trooien, Ole N.....	Civil Engineer, New York City
Winegar, Laura .....	Bookkeeper, Arlington

## PHARMACY GRADUATES.

Allison, Wm. F..	Prof. of Civil Eng., Colorado School of Mines, Golden, Col.
Boyden, Frank E .....	Physician and Surgeon, Brookings
Christianson, Bennett C.....	Druggist, Volga

---

Hayter, McPherson .....	Druggist
Jarrett, Arthur A.....	Druggist, Bristol
Jarvis, Hall S.....	Druggist, Faulkton
Leighty, James A.....	Druggist, Winfred
Morton, Frederic M.....	Drug Clerk, Sisseton
Pickles, Chester E.....	Farmer, Naples
Schnaidt, Henry.....	Druggist, Parkston
Schroeder, Anna C.....	Clerk, Howard
Thomas, John C.....	Drug Clerk, Wakonda

## CLASS OF 1903.

## MASTER OF SCIENCE.

Crane, Austin B.....	Civil Engineer, Spokane, Wash.
Griffiths, David, Ass't Agrostologist, Dep't of Agriculture, Wash., D. C.	
Hoy, Howard H.....	Inst. in Phy. and El. Eng., S. D. S. C.
Norton, Frank A.....	Chemist for National Canning Co., Aspinwall, Pa.

## BACHELOR OF SCIENCE.

Almond, Fred C., Elec. Eng., Wisconsin Central Telephone Co., Milwaukee, Wis.	
Cole, John S.....	Assistant in Agriculture, S. D. S. C.
Cuckow, Fred W.....	Lawyer, Elkton
Drew, Letta (Colgrove).....	Brookings
Hubbart, Minnie E.....	Teacher, Willow City, N. D.
Johnson, Isaac.....	Lumberman, Jamestown, N. D.
Kendall, M. Krete.....	Brookings
Langdon, Alice.....	Teacher, Parker
Miller, Shirley P.....	Ass't in Zoology, S. D. S. C.
Norton, Frank A.....	National Canning Co., Aspinwall, Pa.
Otterness, Jens M.....	Stenographer, Sioux Falls
Peirce, E. Esther.....	Teacher, Clear Lake
Sanborn, Ethel I.....	Teacher, Clear Lake
Sarvis, Roscoe J.....	Prin. of Schools, Wessington
Seide, Louise W. M.....	Teacher, Milbank
Webster, James L.....	Minister, Verona, Wis.
Westcott, Geo. R.....	Registrar and Ass't in Math., S. D. S. C.
*Young, Maggie (Cranston).....	Died 1907, Oakes, N. D.

## PHARMACY GRADUATES.

Drew, Arthur W.....	Druggist, Davenport, N. D.
Hall, Roy J.....	Druggist, Oldham
Heston, Edward C.....	Medical Student, Chicago
Hollister, Arthur R.....	Druggist, Erwin
Howell, John E.....	Drug Clerk, Sioux Falls

---

Johnston, Samuel.....	Druggist, Henry
Norton, Frank A.....	Chemist, National Canning Co., Aspinwall, Pa.
Steiner, Frederick W.....	Medical Student Baltimore, Md.
Trumm, Robert E.....	Druggist, Hazel
Van Dusen, Fred J.....	Drug Clerk, Lake Preston
Williams, Percy.....	Drug Clerk, Brookings
Young, Alfred J.....	Druggist, Oakes, N. D.

## CLASS OF 1904.

## MASTER OF SCIENCE.

Thompson, Clarence.....	Farmer, Dell Rapids
Walter, L. Erving.....	Science Teacher, Germantown, O.

## BACHELOR OF SCIENCE.

Binford, Wm. W....	Inst. in Manual Training Public Schools, Denver, Col.
Kelton, Maude (Bushnell).....	Henry
Loucks, Anna Y.....	Teacher, Altruria
Mattice, Albert F.....	Drug Clerk, Sedro-Wooley, Wash.
McGarry, Lawrence R.....	Prin. of School, Mansfield
Ruth, Thomas H.....	Veterinary Surgeon, De Smet
Sanderson, Everett G.....	Farmer, Brookings
Sherwin, Ralph L.....	Civil Engineer, Scranton, Pa.
Smith, Wm. H.....	Student, Huron
Thompson, Clarence.....	Farmer, Dell Rapids
Walter, L. Erving, Science Teacher, Miami Military Academy, German-	
town, O.	

## PHARMACY GRADUATES.

Anderson, Ernest.....	Drug Clerk, Brookings
Dillon, Cornelius.....	Drug Clerk, Sioux Falls
Frick, Harry E.....	Drug Clerk, Redfield
Goodale, Alton R.....	Drug Clerk, Aberdeen
Hooker, Henry.....	Medical Student, Chicago
Koch, Arthur E.....	Assistant in Chemistry, Brookings
<b>Ramsdell, Leonard O.....</b>	<b>Druggist, Beresford</b>
Thompson, Godfrey.....	Medical Student, Philadelphia, Pa.
Weisflock, Theodore.....	Drug Clerk, Redfield

## CLASS OF 1905.

## MASTER OF SCIENCE.

Norton, Frank A.....	Chemist for National Canning Co., Aspinwall, Pa.
----------------------	--

## BACHELOR OF SCIENCE.

Boyden, Guy L.....	Student of Medicine, Chicago, Ill.
Chappell, Bessie.....	Teacher, Elkton
Davis, Clifford W.....	Special Agent for Dept. of Agriculture, Highmore
Elliott, Roy K.....	Electrician, West Lynn, Mass.
Fassett, Della M.....	Teacher, Brookings
Fishback, Van Dusen.....	Bank Clerk, Brookings
Forrest, Victor E.....	Civil Engineer, Yankton
Fulkerson, Vincent.....	Teacher, Mandan, N. D.
Grove, Mary I.....	Student, S. D. S. C.
Hage, Christian F.....	Mgr. McCoy Lumber Co., Warwick, N. D.
Howg, Edwin M.....	Medical Student, Chicago, Ill.
Jensen, Lewis N.....	Lincoln, Neb.
Johnson, Carl L.....	Electrician, Schenectady, N. Y.
Mathews, Harry E.....	Las Vegas, Nevada
Miller, Ralph L.....	Lumberman, Carrington, N. D.
Murphy, Matt W.....	Law Student, State University, Vermillion
Nelson, John Harland.....	Ass't in Math., S. D. S. C.
Phillips, C. Louise.....	Teacher, Brookings
Ronning, Oscar E.....	Prin. of Schools, Peever
Schaphorst, Wm. F., Ass't. Prof. Mechanical Eng., State Ag. Coll., Las Cruces, N. M.	
Seeger, Adolph M.....	Electrician, West Lynn, Mass.
Slocum, Ina S.....	Music Teacher, Herreid, S. D.
Thogerson, Arthur A.....	Yankton
Walters, Daisy.....	Bruce
Williams, Harry.....	Bank Clerk, Brookings
Williams, Percy.....	Brookings
Wilson, Elsie (Chappell).....	Brookings

## PHARMACY GRADUATES.

Fjerstad, Carl.....	Druggist, Elkton
Howg, Edwin M.....	Medical Student, Chicago
Larson, Lars P.....	Drug Clerk, Howard
Mathews, Harry E.....	Forester, Las Vegas, Nev.
McCurdy, Walter.....	Druggist, Lane
Morton, Grant J., Assistant in Chemistry, State Agricultural Coll., Fargo, N. D.	
Pottinger, Geo.....	Drug Clerk, Dell Rapids
Thompson, Clarence.....	Farmer, Dell Rapids
Volin, Porter.....	Medical Student, Chicago

## CLASS OF 1906.

## BACHELOR OF SCIENCE.

Aldrich, G. Malcolm.....	County Sup't., Brookings
Barrett, J. Wylie.....	Elec. Eng., Mitchell



---

Bonesteel, Bee M.....	Teacher, Brookings
Burghardt, Roy D.....	Electrician, Seattle, Wash.
Carpenter, Abbie J.....	Raymond
Chileott, Ellery F.....	Special Agent Dep't. of Agriculture, Edgerton, N. D.
Coller, Fred A.....	Ass't. in Chemistry, S. D. S. C.
Davies, Gladys.....	Drug Clerk, Letcher
Erstad, Alfred J.....	Electrician, Redding, Cal.
Evans, Edna V.....	Student, S. D. S. C.
Kennard, Frank L.....	Special Agent Dept. of Agriculture
Knox, Arthur H.....	Electrician, Beloit, Wis.
Koch, Arthur E.....	Ass't. in Chemistry, S. D. S. C.
Moffatt, Margaret E.....	Teacher, Brookings
Reich, Rose M.....	Teacher, Brookings
Thornber, Jessie B.....	Teacher, Elkton
Wellington, Ellen (Brownell).....	Interior
Youngberg, Guy E.....	Ass't. Clerk of Courts, Brookings

#### PHARMACY GRADUATES.

Allison, Harold.....	Drug Clerk, Denver, Col.
Bergeim, Olaf.....	Student, S. D. S. C.
Davies, Gladys.....	Letcher
Harber, Bartlett L.....	Drug Clerk, Pratt
Locke, Chas.....	Drug Clerk, Brookings
Wipf, Michael J.....	Drug Clerk, Freeman

#### CLASS OF 1907.

#### MASTER OF SCIENCE.

Culhane, Michael E.....	Lawyer, Brookings
-------------------------	-------------------

#### BACHELOR OF SCIENCE.

Binnewies, Mabel E.....	Brookings
Briggs, Stephen F.....	Elec. Eng., Milwaukee
Burch, Walter S.....	Howard
Christianson, Christine .....	Volga
Dillman, Arthur C.....	Dept. of Agriculture, Wash., D. C.
Dutcher, Adams R.....	Student, S. D. S. C.
Elliott, Bruce A.....	Electrician with Gen. Elec. Co., West Lynn, Mass.
Elliott, Ross W .....	Student of Engineering, S. D. S. C.
Fjerstad, Alman .....	Estelline
Gagel, Gerald.....	Horticulturist, Yankton
Hofstetter, Geo.....	Instructor in Manual Training, Govt. School, P. I.
Kirk, John R.....	Springfield
Johnson, Aaron G.....	Student, S. D. S. C.
Knutson, Mabel A.....	Teacher, Brookings

---

McCordic, Clara .....	Groton
McElmurry, Rilla .....	Teacher, Brookings
Morton, Grant J. ....	Toronto
Reich, J. Carl .....	Student, Chicago
Salmon, Cecil .....	Brookings
Sanderson, Eugene .....	Brookings
Tuttle, Volney J. ....	Madison
Underwood, Genevieve .....	Brookings
Westcott, Ruth M. ....	Brookings
Work, Mary L. ....	Watertown

### PHARMACY GRADUATES.

Dexter, David F. ....	Centerville
Roney, Ray W. ....	Sioux Falls
Ennis, Herbert I. ....	
Kartude, Inga M. ....	Student, S. D. S. C.

---

### GRADUATE STUDENTS.

Coller, Fred A. ....	Chemistry	Brookings
Dutcher, R. Adams .....	Chemistry	Brookings
Elliott, Ross W. ....	Electrical Engineering	Brookings
Evans, Edna V. ....	Commercial	Brookings
Fishback, Myra .....	Home Economics	Brookings
Grove, Mary I. ....	Commercial	Brookings
Hofstetter, George .....	Electrical Engineering	Mitchell
Nelson, John H. ....	Civil Engineering	Brookings

---

### COLLEGIATE.

#### Seniors.

---

Alton, Benjamin H. ....	Pharmacy	Brookings
Bergeim, Olaf .....	Pharmacy	Brookings
Carpenter, Clarence A. ....	Electrical Engineering	Brookings
Chilcott, Ralph W. ....	Agriculture	Brookings
Cooley, William R. ....	Agriculture	Tabor
Griffith, T. Edwin .....	Electrical Engineering	McCook
Holsey, Ernest .....	Electrical Engineering	Canton
Hubbart, Edith J. ....	General Science	Brookings
Hyde, Hallie W. ....	General Science	Brookings
Kelly, Amy .....	Home Economics	Brookings
Kendall, Nellie G. ....	General Science	Brookings

---

Kremer, Henrietta L.....	General Science.....	Brookings
Locke, Francis J.....	Electrical Engineering.....	Castlewood
Mathews, Oscar R.....	General Science.....	Brookings
Mayland, Amy.....	General Science.....	Brookings
Mayland, George R.....	Civil Engineering.....	Brookings
Nelson, Aaron L.....	Electrical Engineering....	Ellendale, N. D.
Nilsson, Edward.....	Electrical Engineering.....	Gary
Olberg, Fred C.....	Pharmacy .....	Brookings
Perry, William J.....	Electrical Engineering.....	Brookings
Soreng, Edgar M.....	Electrical Engineering.....	Dexter
Sperb, John J. H.....	Civil Engineering.....	Tyndall
Ulrich, Darwin W.....	Electrical Engineering..	Fountain City, Wis.
Underwood, Beatrice C.....	Home Economics.....	Brookings
Underwood, Loto R.....	Home Economics.....	Brookings
Weeks, Gordon A.....	Electrical Engineering.....	Yankton
West, Florence E.....	General Science.....	Brookings
Whitehead, Lindsey W.....	General Science.....	Brookings
Williams, Ruby.....	General Science.....	Brookings

#### Juniors:

Bacon, Eva F.....	General Science.....	Brookings
Bushnell, Edna J.....	Home Economics.....	Brookings
Camp, Fred H.....	Electrical Engineering.....	Ree Heights
Clarke, Roy J.....	General Science.....	Howard
Coughlin, Charles.....	Electrical Engineering.....	Carthage
Denhart, Cecil.....	General Science.....	White
Erwin, Ada B.....	Home Economics.....	Brookings
Evans, Iva M.....	Home Economics.....	Brookings
Furnstahl, John P.....	Civil Engineering.....	Howard
Jones, Robert D.....	General Science.....	Reville
Kartrude, Inga M.....	Pharmacy .....	Hardwick, Minn.
Kremer, Alvin V.....	Electrical Engineering.....	Brookings
Lane, A. Lloyd.....	Electrical Engineering.....	Alcester
McKeown, Ralph.....	Civil Engineering.....	Elkton
Marquis, Sidney.....	Mechanical Engineering.....	Clear Lake
Matheny, Chester.....	Electrical Engineering.....	Turton
Mattice, Clyde M.....	Pharmacy .....	Sedro-Wooley, Wash.
Morrison, Guy E.....	Agriculture.....	Top Bar
Odland, John G.....	General Science.....	Beach, N. D.
Palm, Ellen A.....	Home Economics.....	Castlewood
Peirce, Ruth J.....	General Science.....	Brookings
Pembroke, Percy.....	General Science.....	Pittsburg, Pa.
Phillips, George C.....	Electrical Engineering.....	Webster
Sarvis, Johnson T.....	Agriculture .....	Brookings
Sperb, Frank H.....	Civil Engineering.....	Tyndall
Swering, Joe B.....	Electrical Engineering.....	Brookings
Treacy, Timothy C.....	General Science.....	DeSmet

---

Vernlund, Carl.....	Agriculture .....	Astoria
Watson, Robert S.....	Mechanical Engineering.....	Mitchell
White, Orland E.....	Agriculture .....	Delmont
Wickre, Jacob O.....	Agriculture .....	Webster
Wright, Mary M.....	Home Economics.....	DeSmet

### Sophomores.

Anderson, Edith.....	General Science.....	Ashton
Atkinson, Fay.....	Civil Engineering.....	White
Barber, Floyd F.....	Civil Engineering.....	Alpena
Biggar, H. Howard.....	Civil Engineering.....	Aurora
Champlin, Manley J.....	Agriculture .....	Faulton
Cole, Jessie.....	General Science.....	Brookings
Crothers, Harold M.....	Pharmacy .....	Brookings
Crothers, Ralph L.....	Civil Engineering.....	Brookings
Dott, Bertram T.....	Pharmacy .....	Salem
Doughty, Clifton E.....	Civil Engineering.....	White
Fickle, Walter L.....	Electrical Engineering.....	Blunt
Fridley, J. Ray.....	Electrical Engineering.....	Turton
Grotta, Edwin B.....	Civil Engineering.....	Esmond
Hall, Joseph M.....	Electrical Engineering.....	Mound City
Hall, Mabelle D.....	General Science.....	Brookings
Hoch, Joseph L.....	Pharmacy .....	Elkton
Huntimer, Percy.....	General Science.....	Madison
Johnson, Charles H.....	Civil Engineering.....	Hetland
Johnson, Millie C.....	Home Economics.....	Hardwick, Minn.
Kelly, T. B.....	General Science.....	Brookings
Koch, Edwin E.....	Pharmacy .....	Eureka
Ladd, Amy.....	Home Economics.....	Brookings
Ladd, Horace.....	Agriculture .....	Brookings
Lothrop, Elmer M.....	Electrical Engineering.....	Academy
Matheny, Alice.....	Home Economics.....	Turton
Matheny, Fred C.....	Civil Engineering.....	Conde
Morris, Effie M.....	Home Economics.....	Brookings
Morrison, Joseph D.....	Pharmacy.....	Top Bar
Murphy, James P.....	Pharmacy .....	Montrose
Nagel, Herman T.....	Agriculture.....	Berlin, Germany
Ort, Albert A.....	Civil Engineering.....	Bensenville, Ill.
Palm, Andrew W.....	Agriculture .....	Castlewood
Quiggle, Ernest.....	Pharmacy .....	Groton
Randall, Frank E.....	Mechanical Engineering.....	Brookings
Sargent, Ray.....	Civil Engineering.....	Hurley
Sexauer, Elmer.....	General Science.....	Brookings
Sheldon, Nettie E.....	General Science.....	Brookings
Skinner, Lila M.....	General Science.....	Brookings
Thornber, Harvey.....	Agriculture .....	Brookings



---

Twiss, Robert H.	Electrical Engineering	Athol
Tyler, John E.	Civil Engineering	Hartford
Wahl, William W.	Civil Engineering	Columbia
Welch, Cecile I.	General Science	Brookings
West, Harold R.	Civil Engineering	Brookings
Wilson, Frank M.	Pharmacy	Brookings
Wohlheter, Vern G.	General Science	White

### Freshmen.

Abbott, Guy S.	Pharmacy	DeSmet
Aldrich, Mae C.	General Science	Windom, Minn.
Atwood, George B.	Agriculture	Erwin
Balmat, John H., Jr.	Electrical Engineering	Yankton
Bentley, Ray L.	Electrical Engineering	Colman
Bollinger, John	Civil Engineering	Tynsall
Bonesteel, Lee S.	Civil Engineering	Watertown
Brown, George B.	Pharmacy	Clark
Buck, Ervin R.	Pharmacy	Frankfort
Caylor, Grover C.	Mechanical Engineering	Corsica
Chamberlain, Claude W.	Pharmacy	Presho
Chappel, William B.	Civil Engineering	Brookings
Cooledge, Leslie.	Electrical Engineering	DeSmet
Cottingham, Jay T.	General Science	Mount Vernon
Crane, Vance.	Civil Engineering	DeSmet
Crosby, Leroy J.	Pharmacy	Hitchcock
Davison, Frances M.	Home Economics	Brookings
Dickey, James H.	Pharmacy	Iroquois
Dunn, Fred.	Mechanical Engineering	Sisseton
Erwin, Ruth E.	Home Economics	Brookings
Finley, P. Vollmar.	Agriculture	Miller
Fridley, Bess.	Home Economics	Brookings
Fridley, Leonard J.	Commercial	Turton
Fridley, Richard C.	General Science	Brookings
Fuller, Raymond F.	Pharmacy	Gettysburg
Gropengieser, Fred J.	Electrical Engineering	Onida
Haas, Carrie E.	General Science	Arlington
Hallen, Harold O.	Electrical Engineering	Brookings
Hillis, Flossie G.	Pharmacy	Alpena
Jarman, Mabel A.	General Science	Brookings
Johnson, Clifford D.	Agriculture	Broadland
Kilpatrick, Andrew V.	Mechanical Engineering	Houghton
Kibby, Harold F.	Civil Engineering	Lebanon
Kleppin, George P.	Agriculture	Lane
Knutson, A. Geneva.	Home Economics	Brookings
Koch, William A.	Civil Engineering	Eureka
Kukuk, Clara E.	Home Economics	Colman

---

McCain, J. Oscar.....	Electrical Engineering.....	Howard
McCullough, Wesley H.....	Civil Engineering.....	Iroquois
McMillan, Orville G.....	Electrical Engineering.....	Alpena
Mathewson, Lynn L.....	Mechanical Engineering.....	Tripp
Matthews, Irvin J.....	Electrical Engineering.....	Madison
Mattice, Cornelia.....	General Science.....	Sedro-Wooley, Wash.
Meharg, Max W.....	Electrical Engineering.....	Verdon
Mitchell, Harry E.....	Electrical Engineering.....	DeSmet
Nelson, Gertrude M.....	Home Economics.....	Brookings
Nelson, Harry A.....	Civil Engineering.....	Clark
Nicholson, Lyda M.....	General Science.....	Brookings
Oakland, Irvin S.....	Pharmacy .....	Corsica
Odland, Henry.....	General Science.....	Hurley
Odland, Ole M.....	Electrical Engineering.....	Parker
Orth, Dora B.....	Home Economics.....	Elkton
Palm, Hannah.....	General Science.....	Castlewood
Palmer, Harriet.....	General Science.....	Brookings
Parsons, Allyn.....	Pharmacy .....	Hurley
Plocker, Florence M.....	General Science.....	Brookings
Quinn, Roy H.....	Agriculture .....	Arlington
Robinson, Pierre G.....	General Science.....	Cherry Creek
Rundell, Earl O.....	Civil Engineering.....	Hurley
Sharpe, Edwin C.....	Agriculture .....	Bristol
Shepard, Helen.....	General Science.....	Brookings
Sherwin, Muriel.....	Home Economics.....	Brookings
Stacy, Neil A.....	Civil Engineering.....	Granite, Okla.
Starring, Cecil.....	Agriculture.....	Creighton, Neb.
Stearns, James.....	Electrical Engineering.....	Pierre
Swenehart, John H., Jr.....	Agriculture .....	Vandervoort
Thorne, William B.....	Electrical Engineering.....	Hartford
Tinker, Mabel M.....	Home Economics .....	Brookings
Ulrich, George H.....	Electrical Engineering.....	Alma, Wis.
Walters, Leonard D.....	Agriculture .....	Bruce
Wiser, Harry C.....	Agriculture.....	Manley, Iowa
Wohlheter, Walter P.....	General Science.....	White

---

## PREPARATORY.

---

### Third Year.

Austin, Lillian .....	Clark
Bogert, Theodore L.....	Evanston, Illinois
Clark, Ethel O.....	Langford
Fitzgerald, Raphael F.....	Howard
Goddard, Robert S.....	Warnecke

---

Hemmingway, Robert E. B.....	Brookings
Johnson, Arthur J.....	Groton
Loban, Jennie I.....	Brookings
McCarty, Rose .....	Cavour
McCoy, Claude L.....	Brookings
Robinson, Charles E.....	Leslie
Wilcox, Vincent D.....	Brookings

### Second Year.

Ames, Golda .....	Brookings
Anderson, Elmer .....	Veblen
Bacon, Harry W.....	Brookings
Basgen, Fred .....	Goodwin
Beatty, Clarence E.....	Blooming Prairie, Minn.
Berg, Bernard .....	Stockholm
Biggar, James B.....	Brookings
Blanchard, Vesta R.....	Brookings
Colbourne, Bernice M.....	Brookings
Cook, Cora .....	Arlington
Crosier, Frank B.....	Brookings
Crowhurst, Walter F.....	Salem
Devan, Luther E.....	Pollock
Digre, Marie.....	Hendricks, Minnesota
Dokken, Oscar .....	Astoria
Durland, Ben E.....	Brookings
Dye, Elizabeth M.....	Richards
Dye, Edwin C.....	Richards
Dye, Grace D.....	Richards
Dye, Leonard H.....	Richards
Egge, Gustav .....	Garretson
Erdmann, Henry E.....	Armour
Farrankop, Ada .....	Brookings
Goddard, Charles T.....	Warnecke
Gordon, Bernice M.....	Gary
Groff, Mabelle I.....	Brookings
Hartwick, Albert L.....	Brookings
Haven, Herman H.....	Mellette
Heald, Harry M.....	Letcher
Herse, Harry .....	Canova
Hewitt, Curtis J.....	Egan
Hopp, George C.....	Bancroft
Hoy, Harry A.....	LaDelle
Jerlow, Morris .....	St. Mary's
Johnson, Elmer R.....	Brookings
Johnson, Emma V.....	Brookings
Johnson, William O.....	Brookings

---

King, Carrie A.....	Colman
Klepfer, Harley W.....	Columbia
Lightfoot, Bessie M.....	Gary
Loban, Oral G.....	Hitchcock
Ludlam, Eleanor C.....	Brookings
Lynch, Grace E.....	Elkton
McCarty, Bell.....	Cavour
McCarty, Fred J.....	Cavour
McCullough, Donald W.....	Osceola
Marquardt, Elizabeth.....	Wentworth
Matheny, Hazel A.....	Conde
Morton, Richard D.....	Sisseton
Nelson, Robert L.....	Onida
Orth, Etoila M.....	Elkton
Price, George A.....	Pierre
Reeves, Marjory L.....	Brookings
Rehnke, William.....	Cranden
Rilling, Harry E.....	Brookings
Rundell, Roy.....	Hurley
Shea, Charles D.....	Brookings
Shea, M. Henry.....	Brookings
Sheldon, Harry E.....	Brookings
Shepard, Albert D.....	Brookings
Soule, Roy H.....	Brookings
Soule, Scott M.....	Brookings
Sullivan, Effner E.....	Turton
Synoground, Jennie.....	Groton
Tyson, Pearl E.....	Brookings
Vernon, Herbert S.....	Presho
Walters, Paul S.....	Bruce
West, Amy K.....	Brookings
Wheaton, Ray C.....	Brookings
Wheaton, Robert E.....	Brookings
Wornson, Harry R.....	Hadley, Minnesota

### First Year.

Acker, John O.....	Rochester
Allen, Nina E.....	Brookings
Anderson, Esther M.....	Veblen
Bacon, Arthur R.....	Brookings
Bacon, Lulu.....	Brookings
Beardemphl, Henry C.....	Ashton
Beck, Otilie.....	Brookings
Bergsvik, Chris, Jr.....	Yankton
Bogen, Samuel.....	Hendricks, Minnesota
Bury, Ed P.....	Bristol



---

Carson, George P.....	Cherry Creek
Chester, Albert.....	Windom, Minnesota
Churchill, Leslie .....	Hurley
Cowan, Glen E.....	Brookings
Dahl, Esther G.....	Platte
Donahue, Richard T.....	Watertown
Dory, Paul G.....	Watertown
Eken, Clara M.....	Van Metre
Flynn, Joe H.....	Ramona
Fournier, Leon W.....	Cambridge, Massachusetts
Gilbertson, Ida A.....	Brookings
Graham, Myron F.....	Beresford
Grinols, Hazel C.....	Brookings
Grotta, Bessie O.....	Esmond
Haden, Norelle M.....	Toronto
Hanon, Otto S. B.....	Langford
Hawkins, Maude E.....	Brookings
Johnson, Carl Z.....	Heron Lake, Minnesota
Keiper, Valentine C.....	Clayton
Klebsch, Ernest C.....	Redfield
Knutson, Theodore .....	Brookings
Koester, Edward H.....	Brookings
Lee, Peter H.....	Madison
LeMay, Fay E.....	Brookings
Lynch, Mae .....	Elkton
McCarty, Anna .....	Cavour
Madsen, Mae M.....	Arlington
Martinson, Gina E.....	Brookings
Mathison, Albert .....	Astoria
Miller, Ella .....	Waubay
Miller, Elmo .....	Waubay
Nelson, Grace R.....	Toronto
Newgard, John A.....	Elk Point
Nylander, Alice E.....	Estelline
O'Hara, Joseph C.....	DeSmet
Olson, William W.....	Dolph
Patten, Harry D.....	Mansfield
Peterson, Otto .....	Brookings
Place, Park P.....	Brookings
Poole, Neva .....	Brookings
Ristvedt, Elmen .....	Helgen
Ruchti, Rudolph O.....	Houghton
Rudy, Earl .....	Yale
Sample, Joe C.....	Frankfort
Shanley, Clarence .....	Mansfield
Slagle, Lee E.....	Spencer

---

Smith, Ralph S.....	Aurora
Spurling, Edwin B.....	Brookings
Storm, Alvina.....	Merrill, Wisconsin
Storm, Bertha.....	Merrill, Wisconsin
Thompson, Alice .....	Volga
Thompson, Lora .....	Volga
Treacy, Frank P.....	DeSmet
Treacy, James P.....	Mathews
Vauk, Emil V.....	Tabor
Wood, David B.....	Brookings
Wray, Howard E.....	Hurley

### Special Students.

Allison, Nellie .....	Brookings
Bacon, Ernest V.....	Brookings
Beebe, Nettie H.....	Blunt
Casley, Bertha .....	Brookings
Casley, Lulu .....	Brookings
Christie, Clara .....	Volga
Clark, Lide R.....	Turton
Donaldson, Beatrice M.....	Brookings
Dull, Minnie .....	Brookings
Eidsmoe, Ella .....	Beresford
Gilbert, Faye .....	Artesian
Haber, 'Lulu .....	Brookings
Hayes, Helena A.....	Cambridge, Massachusetts
Hess, Mary E.....	Estelline
Huntimer, Fred C.....	Colton
Hyde, Winifred R.....	Brookings
Irish, Mildred .....	Doland
Johnson, Clara A.....	Brookings
Johnson, Mary A.....	Brookings
Keland, H. B.....	Brookings
Lawrence, Ethel .....	Doland
Leekley, Aurora L.....	Brookings
Leekley, Elsie P.....	Brookings
Lindskog, Telia A.....	Bruce
Millham, Charles B.....	Hot Springs
Mockler, Nettie M.....	Brookings
Moon, Seymour E.....	Brookings
Patton, Claude R.....	Volga
Quail, Hannah .....	Brookings
Reid, Hazel M.....	Castlewood
Ringsrud, Thomas .....	Brookings
Roberts, John H.....	Flandreau
Ross, Grace Brown.....	Brookings

Scotchbrook, Frances .....	Wessington
Stoeckel, Anna .....	Bryant
Walters, Verner .....	Bruce
Wilson, Roy O. ....	Brookings
Zickrick, Elmer E. ....	Westover

### Music Students.

Ames, Golda .....	Piano	Brookings
Austin, Lillian .....	Piano	Clark
Birkholtz, Cecelia .....	Piano	Clark
Bogert, Theodore L. ....	Violin	Evanston, Illinois
Casley, Bertha .....	Piano	Brookings
Casley, Lulu .....	Piano	Brookings
Catlett, Marguerite H. ....	Piano	Brookings
Caylor, Carrie I. ....	Piano	Corsica
Christie, Clara .....	Piano, Voice	Volga
Clark, Lide R. ....	Piano	Turton
Comstock, Lulu .....	Voice	Brookings
Cottingham, Jay T. ....	Voice	Mount Vernon
Crosier, Mrs. A. B. ....	Piano	Brookings
Dahl, Esther G. ....	Piano	Platte
Donaldson, Beatrice M. ....	Voice	Brookings
Dull, Minnie .....	Piano	Brookings
Dye, Elizabeth M. ....	Violin	Richards
Dye, Grace D. ....	Piano	Richards
Eidsmoe, Ella .....	Piano, Voice	Beresford
Flynn, Joseph H. ....	Piano	Ramona
Fournier, Leon W. ....	Violin	Cambridge, Mass.
Gordon, Bernice M. ....	Piano	Gary
Haber, Lulu M. ....	Piano	Brookings
Haven, M. Mathilda .....	Piano	Huron
Hayes, Helena A. ....	Voice	Cambridge, Mass.
Hess, Mary E. ....	Piano	Estelline
Hillan, Bertha .....	Piano	Wentworth
Hornby, George E. ....	Piano	Valentine, Neb'r.
Huber, Jonas H. ....	Violin	Freeman
Hyde, Winifred R. ....	Voice	Brookings
Irish, Mildred .....	Piano	Doland
Johnson, A. G. ....	Voice	Brookings
Johnson, Clara A. ....	Piano	Brookings
Johnson, Mary A. ....	Piano	Brookings
Kelly, T. B. ....	Voice	Brookings
Kirby, Harold F. ....	Violin	Lebanon
Klebsch, Ernest C. ....	Horn	Redfield
Kukuk, Clara E. ....	Piano	Colman
Law, Callan W. ....	Voice, Violin	White Lake

Lawrence, Ethel.....	Piano	Doland
Leekley, Aurora L.....	Piano, Voice.....	Brookings
Leekley, Elsie P.....	Violin.....	Brookings
Lerew, Isaac W.....	Violin	Miranda
Lightfoot, Bessie.....	Voice	Gary
Miller, Ella.....	Piano	Waubay
Millham, Charles B.....	Voice	Hot Springs
Nicholson, Lida M.....	Piano	Brookings
Nylander, Alice E.....	Piano	Estelline
O'Hara, Joseph C.....	Violin	DeSmet
Olson, Louise.....	Piano	New London, Minn.
Orth, Etoila.....	Piano	Elkton
Palm, Hannah.....	Piano	Castlewood
Paul, Winifred.....	Voice	Brookings
Paustian, Caroline.....	Violin.....	Hardwick, Minn.
Paustian, Lillian.....	Piano	Hardwick, Minn.
Pierce, Ruth J.....	Piano	Brookings
Quail, Hannah.....	Piano	Brookings
Quinn, Roy H.....	Horn	Arlington
Rehnke, William.....	Piano	Cranden
Reid, Hazel.....	Piano, Voice.....	Castlewood
Rilling, Harry E.....	Voice	Brookings
Scotchbrook, Frances.....	Piano, Voice.....	Wessington
Severson, Elsie M.....	Piano	Brookings
Sexauer, Elmer.....	Voice	Brookings
Sexauer, Laura E.....	Piano	Brookings
Shea, Anna.....	Piano	Brookings
Shea, Charles D.....	Horn	Brookings
Sherwin, Muriel.....	Piano, Voice.....	Brookings
Sloan, Gertrude.....	Piano	Brookings
Smith, Ralph S.....	Piano	Aurora
Thompson, May P.....	Voice	Brookings
Torgrud, Lilly.....	Piano.....	Lake Preston
Watznauer, Anna.....	Piano	Artesian
Welch, Cecile I.....	Piano	Brookings
Wilcox, Vincent D.....	Voice	Brookings
Williams, Ruby.....	Voice	Brookings

### SHORT COURSE STUDENTS.

#### Six Week's Course in Agriculture.

Borup, Christen.....	Vermillion
Briggs, C. D.....	Woonsocket
Bush, Gayle.....	Armour
Ching, R. A.....	Castlewood
Crowhurst, Walter F.....	Canistota
Dixon, J. B.....	Aberdeen



---

Dixon, N. W.....	Aberdeen
Ellefson, Ove.....	Wakonda
Evans, H. D.....	Clark
Everson, A. O.....	Corsica
Forbes, H. A. L.....	Letcher
Granberg, Albin.....	Canova
Hansen, H. K.....	Geddes
Hayden, Harry.....	Toronto
Herbert, Clinton.....	Flandreau
Hillan, A. O.....	Wentworth
Holmes, E. F.....	Beresford
Johnson, Arthur.....	Sturgis
Johnson, R. B.....	Doland
Jones, C. E.....	Humboldt
Kasten, E. W.....	Humboldt
Lakings, Roy.....	Hurley
Law, Callan W.....	White Lake
Leikvold, Olvin.....	Waukon, Iowa
Marsh, W. G.....	Humboldt
Matson, M. A.....	Lake Preston
Meier, C. J.....	Letcher
Michels, J. V.....	Emery
Monk, Arthur B.....	Salem
Myers, J. C.....	Frederick
Nelson, Smith.....	Clark
Newgard, John A.....	Elk Point
Norfjor, H. M.....	Colman
Olson, O. J.....	Naples
Orton, Daniel.....	Wakonda
Pietrus, C. S. J.....	Pierre
Ruchti, Rudolph O.....	Houghton
Schuanter, H. G.....	Big Stone
Scott, Lewis.....	Artesian
Smith, S. R.....	Woonsocket
Stafford, L. E.....	Midland
Swenson, Timon.....	Centerville
Thompson, H. D.....	Fulton
Thorson, Chris.....	Aberdeen
Tollefson, Bennett.....	Houghton
Ulrikson, O.....	Canton
Watznauer, E. F.....	Artesian
Way, A. E.....	Plankinton
Webb, Roy W.....	Aberdeen
Wennbloom, Robert S.....	Hudson
Zimmermann, E. W.....	Fedora

### Two Weeks Course in Agriculture.

Britt, Charles.....	Mitchell
Bush, Raymond.....	Salem
Estabrook, I. L.....	Woonsocket
Hanson, Thomas.....	Hazel
Hewitt, Ben.....	Egan
Kelly, T. T.....	DeSmet
Knox, James B.....	Alpena
Kopperud, A. B.....	Gary
Reeve, H. A.....	Tipton, Iowa
Richards, P. K.....	Tipton, Iowa
Ruste, Christ. L.....	Montrose

### Short Course in Home Economics.

Birkholtz, Cecilia.....	Clark
Caylor, Carrie I.....	Corsica
Haven, M. Mathilda.....	Huron
Johnson, Clara.....	Lake Norden
Kaulson, Amelia.....	Pierpont
McCarthy, Mamie.....	Brookings
Moe, Alma.....	Bruce
Nystrom, Hilda.....	Arlington
Paulson, Rena.....	Dell Rapids
Shelstad, Serena.....	Lake Norden
Watznauer, Anna.....	Artesian
Wein, Rosa.....	Butler

### Short Course in Dairy Science.

Gill, Samuel.....	Hitchcock
Hansen, H. K.....	Geddes
Poulson, F. B.....	Hitchcock
Rishoi, Miller.....	White
Rognes, Chris.....	Astoria
Rognes, Gilbert P.....	Astoria
Ruttum, Anton.....	Astoria
Sullivan, Francis.....	Turton
Tollefson, Bennett.....	Houghton
Winn, Arbie C.....	Castlewood

### Short Course in Steam Engineering.

Abrahamson, Amos L.....	Pennoch, Minnesota
Arneson, Alfred A.....	Effington
Baney, Joseph.....	Olivet
Bryant, Frank.....	Garden City
Burshum, Johannes.....	Brookings
Carlsen, Almer.....	Yankton

---

Caylor, James W.	Corsica
Coleman, Fred.	Houghton
Dixon, Ned W.	Aberdeen
Dixon, Joe B.	Aberdeen
Evanger, Henry	Bryant
Fergen, Frank	Parkston
Fordahl, Gunder	Effington
Gilbert, Glen J.	Brookings
Hague, Etna L.	Highmore
Harndierks, Fred	Woonsocket
Haugen, Peter R.	Baltic
Helland, Charles	Clear Lake
Hilts, Alvia F.	Hazel
Huber, Jonas H.	Freeman
Jensen, John A.	Oacoma
Johnson, John S.	Marion
Kirsche, Fred N.	Watertown
Kuapp, Harry J.	Bad Axe, Michigan
Korthauer, Henry	Ward
Krohmer, John	Wessington Springs
Lerew, Isaac W.	Miranda
Lindahl, Harry	Standburg
Long, Auborn R.	Scotland
Lorshbough, Eldon L.	Clark
Millett, Fred A.	Hudson
Mueller, Emil H.	Parkston
Nelson, Niel J.	Dolph
Oyen, Sivert A.	Renner
Piper, Frank J.	Ashley, North Dakota
Philipp, Henry	Fedora
Radeliffe, Benjamin A.	Wolsey
Rawson, G. E.	Canistota
Scott, Lewis D.	Artesian
Siegert, August C.	Twin Brooks
Skorheim, Anton C.	Hudson
Small, J. Dow	Cavour
Thompson, James	Baltic
Thompson, William S.	Doland
Wagner, Mike	Watertown
White, Louis A.	DeSmet
Wiese, Ferdinand	Elkton
York, Milt D.	Huron
Zirbes, John P.	Watertown

### Short Course Special Students.

Berg, Oscar E.	Stockholm
Bjornstad, Henry	Bruce

---

Hillan, Bertha E.....	Wentworth
Hornby, George E.....	Valentine, Nebraska
Knox, James B.....	Alpena
Law, Callan W.....	White Lake
Meier, Henry P.....	Woonsocket
Noonan, Hiram.....	Brookings
O'Hara, Patrick E.....	DeSmet
Ruste, Christ .....	Montrose
Thompson, Gust .....	Baltic
Tufty, Oliver M.....	Brookings



## SUMMARY.

---

Graduate Students .....	8
Collegiate Students—	
Seniors .....	29
Juniors .....	32
Sophomores .....	46
Freshmen .....	72
	— 179
Preparatory Students—	
Third Year .....	12
Second Year .....	71
First Year .....	67
	— 150
Special Students .....	38
Music Students .....	76
Short Course Students—	
Six Weeks' Agriculture.....	51
Two Weeks' Agriculture.....	11
Home Economics .....	12
Dairy Science .....	10
Steam Engineering .....	49
Specially Classified .....	12
	— 145
Total .....	596
	—
Names repeated .....	71
	—
Net Total .....	525

# INDEX

	Page		Page
Abbreviations .....	31	Department .....	35
Adams Act .....	16	Design of Power Stations .....	75
Admission, Conditions of .....	30	Dietetics .....	66
Agriculture.....	36, 57, 129	Domestic Art .....	68, 123
Alternating Currents .....	74	Dormitorys.....	25
Alumni .....	142	Drug Assaying .....	100
Alumni Association .....	142	Dynamo Design .....	74
Analytic Mechanics.....	88	Dynamo Electric Machinery ....	74
Anatomical Methods .....	94		
Architectural Drawing and De- sign .....	70	Economics .....	85
Art .....	111, 123	Electrical Engineering .....	45, 48, 73
Art History .....	112	Electric Light and Power Distri- bution .....	75
Astronomy .....	88	Employees .....	13
Athletics .....	27, 29, 139	Engineering Design .....	72
Athletic Grounds .....	19	English.....	80, 118
Attendance .....	33	Entertainments .....	29
		Entomology .....	92
Bacteriology .....	65	Entrance Conditions .....	30
Bookkeeping .....	126	Equipment .....	17
Botany .....	91	Establishment and Purpose .....	14
Breeds of Live Stock .....	57	Ethics .....	86
Buildings .....	181	Examination for Entrance .....	30
Butter Makers Course .....	136	Excuses.....	33
		Expenses, Students' .....	24, 102, 125
Calendar .....	3	Experiment Station .....	12, 17, 56
Calculus .....	88		
Campus.....	17		
Carpentry .....	122	Faculty .....	5, 22
Chapel Exercises .....	27	Farm .....	18
Chaucer.....	80	Farm Crops .....	58
Cheese Making.....	61	Farm Mechanics .....	59
Chemistry .....	95	Farm Management .....	59
Christian Associations .....	28	Floriculture .....	64
Civil Engineering .....	46, 49, 76	Foods .....	66
Clothing and Shelter .....	66	Forestry .....	64
Collegian Staff and Organization .....	30, 139	Forging .....	122
Commercial Science .....	125	Free Hand Drawing .....	123
		French .....	83

	Page		Page
Committees, Faculty .....	22	Freshmen .....	158
Conditioned Students .....	32	Gas and Oil Engines .....	70
Conduct, Student .....	23	General Science Course .....	49
Contracts and Specifications ....	78	Genetics .....	63
Cooking .....	123	German .....	82
Courses of Study .....	36	Geodesy .....	77
Dam and Reservoir Design .....	78	Geology.....	94
Dairying .....	60, 136	Grades.....	32
Degrees .....	34	Gymnasium .....	19
Handicraft .....	112	Painting, Oil .....	112
Hatch Act .....	16, 56	Pharmacognosy .....	92
Heat .....	90	Pharmacy.....	53, 54, 97
Heating .....	20, 73	Pharmacy Graduates .....	145-155
History .....	84, 120	Philosophy .....	86
History of Education .....	84	Physical Culture .....	27, 113
Home Economics .....	41, 67	Physics .....	89, 121
Home Gardening .....	64	Physiography.....	122
Horseshoeing .....	65	Physiology .....	93, 122
Horticulture.....	62	Piano Music .....	100
Household Economy .....	67	Policy of the College.....	17
Household Sanitation.....	67	Pomology .....	63
Hydraulics .....	77	Political Science .....	84
Hygiene .....	67	Postal Facilities.....	21
Income, Sources of .....	15	Post Graduates .....	155
Invalid Cookery.....	67	Power Transmission .....	72
Irrigation.....	77	Preparatory Department .....	118
Juniors .....	156	Preparatory Students .....	159
Kinematics.....	71	Prizes .....	29
Laboratories .....	19	Psychology .....	86
Labor, Student .....	26	Publications, Student .....	30
Landscape Gardening.....	64	Public Speaking .....	113
Languages, Modern .....	82	Polyphase Currents.....	75
Latin .....	81, 119	Railroad Engineering .....	78
Law .....	127	Regents.....	4, 21
Lecture and Class Rooms .....	20	Registration, Method of .....	31
Library .....	19, 119	Required Exercises .....	22
Light .....	90	Rhetoric .....	80, 119
Lighting .....	20	Roads and Pavements .....	78
Literature.....	80	Sanitary Conditions .....	20
Literary Societies .....	28, 139	Schedules of Courses.....	36
Living Arrangements of Students .....	22, 25	Schemes of Study .....	36
		Scholarships .....	26
		Seniors .....	155
		Sewerage .....	78

	Page		Page
Location of College .....	15	Sewing .....	68, 123
Machine Shop .....	69	Short Courses.....	3, 35, 13
Market Gardening.....	64	Shorthand .....	126
Masonry and Foundations.....	78	Sociology .....	85
Mechanics of Materials.....	71	Soils.....	58
Materia Medica .....	99	Sophomores .....	157
Mathematics .....	87, 121	Special Courses .....	3, 35, 13
Mechanical Drawing .....	69, 122	Special Students .....	31
Mechanical Engineering .....		Steam Boilers .....	71
.....	43, 48, 68, 122	Steam Engineering .....	138
Mechanism, Elements of .....	70	Steam Engines .....	70
Methods of Teaching .....	87	Stock Breeding .....	57
Military .....	27, 117, 140	Stock Feeding .....	58
Morrill Act .....	16	Stock Judging .....	57
Museums .....	20	Student Affairs .....	22
Music .....	100	Study Room .....	20
		Surveying .....	76
Nelson Fund .....	16	Telephone Engineering.....	74
Nursery Handicraft .....	64	Terms and Vacations .....	3, 23
Home Nursing and Invalid Cook- ery .....	67	Time to Enter .....	23
Oratorical Association .....	29, 139	Testing of Power Plants .....	75
Organizations, Student .....	29, 139	Thermodynamics.....	70
Tutoring .....	23, 33	Tuition .....	24
Tutors .....	13	Voice .....	100
Typewriting .....	126	Water Supply .....	77
Veterinary Anatomy .....	65	Wood Turning .....	122
Veterinary Medicine .....	65	Zoology .....	93, 122
Violin .....	100		









57dH  
2-09

Volume 1

APRIL, 1909

Number 4

---

**South Dakota State College  
of Agriculture and  
Mechanic Arts  
Bulletin**

---

**Annual Catalog  
1908-1909**

---

**Published Quarterly by  
SOUTH DAKOTA STATE COLLEGE  
Brookings, S. D.**

Entered as second-class matter August 10, 1908, at the postoffice at Brookings, S. D.,  
under the Act of July 16, 1904





---

**South Dakota State College  
of Agriculture and  
Mechanic Arts  
Bulletin**

---

**Annual Catalog  
1908-1909**

---

**Published Quarterly by  
SOUTH DAKOTA STATE COLLEGE  
Brookings, S. D.**

Entered as second-class matter August 10, 1908, at the postoffice at Brookings, S. D.,  
under the Act of July 16, 1904



## Calendar for 1909-10

---

1909

### FIRST SEMESTER.

September 20-21—Entrance examinations and registration.

September 22—Work of first semester begins.

October 1—Faculty reception to students.

November 1—Last day for announcing subjects of theses.

November 1—School of Agriculture opens.

November 25-26—Thanksgiving recess.

December 22—Christmas vacation begins.

1910

January 4—Christmas vacation ends at 8:00 a. m.

January 4—Second term of School of Agriculture begins.

January 31-February 4—Examination week.

### SECOND SEMESTER.

February 7—Second Semester begins.

March 30—School of Agriculture closes.

March 31-April 5—Spring vacation.

May 30—Senior vacation begins.

June 6-10—Examination week.

June 12—Baccalaureate Sunday.

June 15—Commencement exercises at 10:30 a. m.

---

## Calendar of Short Courses

---

September 22-June 15—One year's course in dairy science.

January 3-June 9—Short course in steam engineering.

January 3-March 25—Three months creamery course.

January 3-January 14—Short course in poultry husbandry.

January 3-January 14—Short course in dairy science.

January 3-January 14—Short course in stock judging.

January 3-January 14—Short course in corn judging.



## **Regents of Education**

---

HON. E. C. ERICSON.....	Elk Point
HON. A. J. NORBY.....	Sisseton
HON. ALBERT M. ANDERSON.....	Sturgis
HON. A. E. HITCHCOCK.....	Mitchell
HON. T. W. DWIGHT.....	Sioux Falls

---

## **Officers of the Board**

---

HON. E. C. ERICKSON.....	President
HON. I. D. ALDRICH.....	Secretary
HON. GEORGE G. JOHNSON, (State Treasurer).....	Treasurer

---

## **Regents' Committee for the College**

---

HON A. J. NORBY

HON. A. E. HITCHCOCK

C  
50874  
1903

## \*Faculty

---

**ROBERT LINCOLN SLAGLE, A. M., Ph. D., President.**

A. B., Lafayette College, 1887; A. M., Lafayette College, 1890; Ph. D., Johns Hopkins University, 1894; Assistant to Professor W. O. Atwater in food investigation, Middletown, Connecticut, and New York City, 1894-1895; Professor of Chemistry, South Dakota Agricultural College, 1895-1897; President and Professor of Chemistry South Dakota School of Mines, 1897-1905; present position since 1906.

**JAMES HENRY SHEPARD, B. S., Professor of Chemistry.**

B. S., University of Michigan, 1875; Post-Graduate Student in University of Michigan, 1881-1882; Instructor in Natural Sciences, Ypsilanti, Michigan, High School, 1882-1886; present position since 1888.

**HALVOR CHRISTIAN SOLBERG, M. E., Professor of Mechanical and Steam Engineering.**

B. S., South Dakota Agricultural College, 1891; B. M. E., Purdue University, 1895; M. E., Purdue University, 1896; Professor of Practical Mechanics, South Dakota Agricultural College, 1891-1896; present position since 1896.

**NIELS EBBESEN HANSEN, M. S., Professor of Horticulture and Forestry.**

B. S., Iowa Agricultural College, 1887; M. S., Iowa Agricultural College, 1894; Commercial Iowa Nurseries, Atlantic and Des Moines, 1888-1891; Assistant Professor in Horticulture, Iowa Agricultural College, 1891-1895; Agricultural Explorer for U. S. Department of Agriculture to Europe and Asia, 1897-1898, 1906-1907; present position since 1895.

**HUBERT BERTON MATHEWS, M. S., Professor of Physics and Electrical Engineering.**

B. S., South Dakota Agricultural College, 1892; M. S. South Dakota Agricultural College, 1899; pursued special work at various times in the Universities of Michigan, Wisconsin and Nebraska; Superintendent of City Schools, Clark, S. D., 1892-1893; Assistant in Chemistry and Physics, South Dakota Agricultural College, 1893-1896; Professor of Physics, 1896-1899; present position since 1899.

**BOWER THOMAS WHITEHEAD, M. S., Ph. C., Professor of Pharmacy.**

Ph. G., South Dakota Agricultural College, 1895; Ph. C., Northwestern University, 1896; B. S., South Dakota Agricultural College, 1897; M. S., South Dakota Agricultural College, 1901; present position since 1896.

**GEORGE LINCOLN BROWN, Ph. D., Professor of Mathematics and Astronomy.**

B. S., University of Missouri, 1892; Teaching Fellow in Mathematics, 1892-1893; M. S., 1893; Fellow in Mathematics, University of Chicago, 1894-1896; Ph. D., University of Chicago, 1900; present position since 1896.

---

\*With the exception of the president, the names occur in the order of appointment.

**EDWARD LOCKHART MOORE, B. S., D. V. S.,** Professor of Zoology and Veterinary Medicine.

B. S., Cornell University, 1896; D. V. S., Columbian University, 1898; present position since 1898.

**ARTHUR BOONE CROSIER,** Professor of Commercial Science.

Student in Brandenburg Academy, Kentucky and New Albany Business College, Indiana; Principal of Shorthand Department Bryant and Stratton Business College, Chicago, 1896-1897; admitted to practice law in South Dakota, October, 1904; present position since 1898.

**ADA BERTHA CALDWELL,** Professor of Industrial Art and Preceptress.

Student Art Institute of Chicago, 1893-1897; Instructor in Art, Yankton College, 1897-1899; Professor of Industrial Art, South Dakota Agricultural College, 1899-1907; Student Teachers' College, N. Y., and Chase School of Art, N. Y., 1903-1904; Student Summer Course Handicraft Guild, Minneapolis, 1905, 1906 and 1907; present position since 1907.

**ROBERT BLACKWOOD FORSEE, Pe, P.,** Principal of Preparatory Department.

Principal of Pedagogy, Western College, Missouri, 1888; Principal Elgin, Missouri, Schools, 1889-1891; Steffenville, 1892-1893; Estelline, South Dakota, 1895-1896; County Superintendent Hamlin County, South Dakota, Schools, 1896-1900; present position since 1901.

**ALBERT SPENCER HARDING, A. M.,** Professor of History and Political Science.

B. S., South Dakota Agricultural College, 1892; Fellow in American History, University of Nebraska, 1896-1897; A. M., University of Nebraska, 1897; Assistant in History and Civics, South Dakota Agricultural College, 1897-1900; present position since 1901.

**JAMES WILBUR WILSON, M. S. A.,** Director of the Experiment Station and Professor of Animal Husbandry.

B. S. A., Iowa Agricultural College, 1896; M. S. A., Iowa Agricultural College, 1898; Assistant in Agriculture at the Iowa Agricultural College, 1896-1897; Private Secretary to Secretary of Agriculture, 1897-1900; present position since 1902.

**WILLIAM HOWARD POWERS, A. B., M. A.,** Librarian and Associate Professor of English.

A. B., Miami University, 1891; A. M., Harvard University, 1899; Student in the Graduate School, Harvard, 1899-1901; Instructor in Mathematics, Ohio Normal University, 1888-1889; Master of the High School, Marwich, Massachusetts, 1892-1895; Head of the Department of English, High School, Pawtucket, Rhode Island, 1895-1898; Professor of English, Huron College, 1901-1905; present position since 1905.

**WILLIAM SOLOMON HAYES, A. B.,** Professor of French and German.

A. B., Harvard, 1899; Student in France, Germany, Italy and Spain, four years; Professor of the Romance Languages, University of Vermont, 1900-1905; present position since 1906.

**EDITH MARY WILCOX, B. L., Ed. B.,** Professor of Home Economics.

B. L., University of California, Berkeley, California, 1905; Ed. B., University of Chicago, 1906; present position since 1906.

**HENRY HANSON LOUDENBACK,** Professor of Music.

Graduate Conservatory of Music, Campbell University, Holton, Kansas, 1902; Assistant in Piano and Theory of Music, Campbell University, 1901-1902; Director of School of Music, Atchinson County High



School, Effingham, Kansas, 1902-1906; Student in Virgil Clavier Piano School, New York City, 1903; Repertory with Allen Spencer in American Conservatory, Chicago, 1906; Student of Pipe Organ under Bertram Weber, Chicago, 1906; present position since 1906.

HOMER MUNRO DERR, A. M., Ph. D., Professor of Civil Engineering.

A. B., Leland Stanford University, 1898; A. M., Columbia University, 1901; Ph. D., University of Pennsylvania, 1903; elected Scholar in Physics, Clark University, 1899, and Scholar in Geology, Columbia University, same year; Assistant in Physics, Columbia University, 1899-1901; Instructor in Mining Engineering and Geology, University of Wyoming, 1901-1902; Tyndall Fellow, University of Pennsylvania, 1902-1903; Superintendent of Mines and in charge of dam construction for hydraulic mining, Santa Margarita Gold Mining Company, Department of Antioquia, Colombia, South America, 1903-1904; Professor of Mathematics and Civil Engineering, Clarkson School of Technology, 1904-1906; Engineer with South Dakota Railroad Commission, summer of 1908; present position since 1907.

ARTHUR AMBER BRIGHAM, Ph. D., Principal School of Agriculture.

B. S., Massachusetts Agricultural College, 1878; Professor of Agriculture in the Imperial College of Agriculture, Sapporo, Japan, 1889. 1893; Ph. D., Goettingen University, Germany, 1896; Professor Agriculture, College of Agriculture and Mechanic Arts, Rhode Island, 1896-1901; Experimenting in Incubation at Ithaca, New York, 1901-1902; Director of Columbia School of Poultry Culture, 1903-194; present position since 1907.

EDGAR WILLIAM OLIVE, A. M., Ph. D., Professor of Botany.

B. S., Wabash College, 1893; S. M., Wabash College, 1895; A. M., Harvard University, 1897; Ph. D., Harvard University, 1902; Assistant in Botany, Harvard University and Radcliffe College, 1897-1898; Instructor in Botany, Harvard and Radcliffe, 1898-1903; Research Student of Carnegie Institution of Washington at University of Bonn, 1904-1905, and at the University of Wisconsin, 1905-1907; Lecturer in Botany, University of Wisconsin, 1905-1907; present position since 1907.

C. LARSEN, M. S. A., Professor of Dairy Husbandry.

B. S. A., Iowa State College, 1902; M. S. A., Iowa State College, 1904; Study of European dairying, 1900; Dairy Instructor Massachusetts Agricultural College, 1901; Assistant and Associate Professor of Dairying, Iowa State College, 1902-1906; Professor of Dairy Husbandry, Utah Agricultural College, 1907; present position since 1907.

MADISON CLAIR BATES, A. M., Professor of English.

A. B., Williams College, 1904; A. M., Williams College, 1905; A. M., Harvard University, 1906; Instructor in English, University of Illinois, 1906-1907; present position since 1907.

JESSIE MAY HOOVER, B. S., Preceptress of the School of Agriculture.

Graduate of Kansas State Normal College, 1898; Student of Domestic Science at Lewis Institute of Technology, 1904; B. S. in Domestic Science, Kansas State Agricultural College, 1905; Student of Domestic Science and Chemistry, University of Chicago, 1907; Teacher in city schools of Topeka, Kansas, for six years; Supervisor of Manual Training for Girls and Teacher of Household Science in the Plummer Manual Training School, Idaho Springs, Colorado, 1905-1906; present position since 1907.

CLIFFORD WILLIS, S. B., M. S., Professor of Agronomy.

Student at State Normal School, Illinois, Summer Sessions, 1894



and 1895; Student at Illinois Wesleyan University, 1898-1899; Sc. B., University of Illinois, 1900; M. S. in Agronomy, University of Illinois, 1906; Principal of Public Schools, Hudson, Illinois, 1893-1895; Principal of High School, Stanford, Illinois, 1895-1898; Head Teacher of Mathematics in High School, Champaign, Illinois, 1900-1901; Principal of High School, Urbana, Illinois, 1901-1903; Assistant in Soil Physics, College of Agriculture and Agricultural Experiment Station, University of Illinois, 1903-1905; Instructor in Soil Physics, College of Agriculture, and First Assistant in Soil Physics, Agricultural Experiment Station, University of Illinois, 1905-1908; present position since 1908.

**FRANCIS J. HAYNES**, Associate Professor of Music.

Graduated in vocal music from Hillsdale College, Michigan; Pupil of Mariscaldi; taught at various times in Western Reserve Seminary, West Farrington, Ohio; Bartell College of Music, Warren, Ohio; Streater Conservatory of Music, Streater, Illinois, and Michigan State Industrial School, Lansing, Michigan; Instructor in Vocal Music and Band Leader in South Dakota Agricultural College, 1906-1908; present position since 1908.

**ROBERT MATHESON**, M. S. in Agr., Professor of Entomology.

B. S. A., Cornell University, 1906; M. S. in Agriculture, Cornell University, 1907; Instructor in Entomology, South Dakota Agricultural College, 1907-1908; present position since 1908.

**JOSEPH NEWTON RODEHEAVER**, A. M., Ph. D., Professor of Philosophy and Education.

B. S., Ohio Wesleyan University, 1901; A. M., Ohio Wesleyan University, 1902; Instructor in Philosophy and English, Ohio Wesleyan University, 1901-1903; Fellow in Psychology, Clark University, Worcester, Massachusetts, 1903-1904; Student in Philosophy, Graduate School, Boston University, 1904-1905; Acting Professor of English and Logic, Middlebury, Vermont, College, 1905-1906; Instructor in Logic, School of Expression, Boston, 1906-1907; Ph. D., Boston University, 1907; Instructor in Psychology and Public Speaking, Wabash College, 1907-1908; present position since 1908.

**EDWARD R. CHRISMAN**, Captain 16th U. S. Infantry; Professor of Military Science and Tactics.

U. S. M. A., 1884-1888; Second Lieutenant U. S. A., 1888; First Lieutenant, 1895; Captain, 1899; Sioux Indian Campaign, 1890-1891; Santiago Campaign, 1898; Philippine Insurrection, 1899-1902; Philippines, 1906-1907; Professor of Military Science and Tactics, University of Idaho, 1894-1898, 1902-1905; Adjunct Professor of Mathematics, University of Idaho, 1896-1898; present position since 1909.

**J. V. BOPP**, B. S., Associate Professor of Agronomy.

B. S., University of Illinois, 1908; Illinois State Soil Survey, 1906-1907; Instructor in Agronomy, South Dakota State College, 1908-1909; present position since 1909.

---

## Instructors and Assistants

---

**HOWARD H. HOY**, B. S., M. S., Instructor in Physics and Electrical Engineering.

B. S., South Dakota Agricultural College, 1896; M. S., South Dakota Agricultural College, 1903; pursued special work in electrical

engineering in the Universities of Nebraska and Wisconsin; Instructor in Mechanical and Electrical Engineering, South Dakota Agricultural College, 1899-1904; present position since 1904.

MAUD GODDARD, Instructor in Industrial Art.

Student Art Institute, Chicago, 1903; Student Summer Course, School of Fine Arts, Minneapolis, 1907; present position since 1903.

ARTHUR EDWIN KOCH, Assistant in Chemistry.

Ph. G., South Dakota Agricultural College, 1904; B. S., South Dakota Agricultural College, 1906; M. S., South Dakota State College, 1908; present position since 1906.

CARL CHRISTENSEN, Instructor in Violin and Other Instruments.

Studied with Professor Christian Madsen, of Copenhagen, Denmark; since coming to America has studied under several noted instructors, the most notable being Mr. C. F. Toenniges, of Davenport, Iowa, he being a pupil of Theodore Spiering, of Chicago; studied under Mr. Alfred Spiel, Minneapolis, 1908-1909; present position since 1906.

CARRIE LOUISE PHILLIPS, B. S., M. S., Assistant Librarian.

B. S., South Dakota Agricultural College, 1901; M. S., South Dakota Agricultural College, 1905; present position since 1906.

GERTRUDE S. YOUNG, A. B., Instructor in Preparatory Department.

A. B., University of Wisconsin, 1906; present position since 1907.

NOLA KATHERINE FROMME, B. S., Instructor in Home Economics.

B. S. in Domestic Science, Ohio State University, 1905; present position since 1907.

CHARLES HERMAN VIOL, B. S., Instructor in Chemistry.

B. S., Purdue University, 1907; Chemist Union Starch and Refining Company, Edinburg, Indiana, 1907; present position since 1907.

ROBERTSON COOK, M. E., Instructor in Mechanical and Steam Engineering.

M. E., University of Minnesota, 1902; Assistant Instructor in Mechanical Engineering, University of Minnesota, 1903; Engineer with Oliver Iron Mining Company, Duluth, Minnesota, 1904; Mechanical Engineer for the Western Lime and Cement Company, Milwaukee, Wisconsin, 1904-1908; present position since 1908.

LINDSEY W. WHITEHEAD, B. S., Instructor in Mathematics.

B. S., South Dakota State College, 1908; present position since 1908.

BENJAMIN H. ALTON, B. S., Instructor in Zoology and Bacteriology.

B. S., South Dakota State College, 1908; Member of the Woods Hole Marine Biological Laboratory, Summer of 1908; present position since 1908.

WALTER EDWARD JOSEPH, B. S., Instructor in Animal Husbandry.

B. S., Purdue University, 1907; present position since 1908.

T. HERBERT LUND, Instructor in Dairy Husbandry.

Student at Ontario Agricultural College, Guelph, Canada, 1902-1905; Student-Instructor at Ames, Iowa, 1905-1906; Manager George Creamery Company, George, Iowa, 1906-1907; Investigation of British Dairy Markets, Summer of 1907; Special Advanced Dairy Student, Madison, Wisconsin, 1907-1908; present position since 1908.

JASON M. SAUNDERSON, A. B., Director of Athletics.

A. B., Albion College, 1908; Physical Training, Detroit Athletic Club, 1907; Physical Training Classes, Albion College, 1907-1908; present position since 1908.

**EDNA McCLOUD PERRY, A. B., Instructor in Piano.**

A. B., Smith College, 1907; Graduate American Conservatory of Music, Chicago, 1908; present position since 1908.

**R. ADAMS DUTCHER, B. S., Assistant in Chemistry.**

B. S., South Dakota State College, 1907; present position since 1908.

**H. J. BESLEY, A. B., Assistant in Agronomy.**

A. B., University of Wisconsin, 1908; with Chicago Telephone Company, on underground construction work from Chicago to Milwaukee, 1906; Assistant Chemist at Iron Mine of Colorado Fuel and Iron Company, Sunrise, Wyoming, 1907; present position since 1908.

---

## Clerical Force

---

R. A. Larson .....	Secretary
R. O. Wilson.....	Private Secretary to President
Mary I. Grove.....	Registrar
Benjamin B. Lawshe.....	Experiment Station Stenographer
Nina M. Waters.....	Matron of Dormitory

## Members of Station Council

---

A. J. Norby.....	Member Regents' Committee for the College
A. E. Hitchcock..	Member Regents' Committee for the College
Robert L. Slagle.....	President of the College
James W. Wilson.....	Director and Animal Husbandman
Niels E. Hansen.....	Vice Director and Horticulturist
James H. Shepard.....	Chemist
Edward L. Moore.....	Veterinarian
Edgar W. Olive.....	Botanist
Christian Larsen.....	Dairy Husbandman
Clifford Willis.....	Agronomist
Robert Matheson.....	Entomologist



## Other Employees

---

George E. Purdy.....Janitor and Carpenter  
Fred R. Betkey.....Engineer  
Fred C. Stoltenberg.....Florist

---

William F. West.....Field Assistant  
J. J. Rossman.....Field Assistant  
Sylvester Balz.....(Highmore) Field Assistant  
Benjamin Herman.....(Eureka) Field Assistant  
Steven Sussex.....(Cottonwood) Field Assistant  
Arne Larson.....Assistant Horticulturist  
W. H. Beals.....Assistant Horticulturist  
John G. Johnson.....Horticulturist Teamster  
H. C. Hanson.....Farm Laborer  
L. McGarry.....Farm Laborer  
P. P. Hoff.....Farm Laborer  
H. Borgerson.....Farm Laborer  
R. S. Bosler.....Assistant Janitor  
Pauline Liskie.....Janitress  
Peter Green.....Night Watchman  
Abraham Vold.....Fireman  
Claude Davis.....Campus Teamster



## **General Information**

### **A--Historical**

1. **ESTABLISHMENT.** An Act of Congress approved July 2, 1862, gave to each state 30,000 acres of public lands for each representative in Congress towards "the endowment, support and maintenance of at least one college, where the leading object shall be, without excluding other scientific and classical studies, and including military tactics, to teach such branches of learning as are related to agriculture and mechanic arts." In compliance with this act the territorial legislature of 1881 passed an act establishing an agricultural college at Brookings, in the Territory of Dakota.

The legislature of 1883 provided for the erection of the first building. This building, now known as the Central Building, was built in 1884.

Upon the division of the Territory of Dakota into the States of North and South Dakota when admitted into the Union in 1889, the Agricultural and Mechanical College of Dakota became known as the South Dakota Agricultural College.

2. **PURPOSE.** The College is devoted to advancing the interests of practical education, its purpose being to give men and women such training as will best fit them for the active duties of life, whether it be in the fields, the shops, the house, or in the class or counting rooms.

In the act of the legislature establishing the institution it was designated "The Agricultural and Mechanical College," and in the Congressional act these colleges were spoken of as "Colleges of Agriculture and Mechanic Arts." In order that the name might more nearly conform to the object for which the College was established the legislature of 1907 changed it to "The State College of Agriculture and Mechanic Arts."

It is the policy of the institution to make itself a part of the common school system; first, by continuing the work of the young

people from the point in their education where the lower school stops, thus giving them an opportunity to become liberally and practically educated within the boundaries of their own state; second, by assisting in the training of public school teachers, especially in the various sciences.

Although the work of this institution is largely scientific, it is of such diversified character that the student can pursue work along almost any line which his taste dictate. The aim of all the work offered is to fit young people to occupy ably any positions they may be called upon to fill, and to make better and more intelligent citizens of them.

A constant effort is made to reach the masses of the people in the state and interest them in the application of science to industrial pursuits, and in the more general improvement of their home life and every day activities.

3. LOCATION. The College is located upon an eminence one mile from the business center of the city of Brookings, and four miles from the Big Sioux River. Brookings is situated on the Central Dakota Division of the Chicago and North-Western Railway; the Watertown branch of the same road makes connections with the main line at this point. It has a population of about three thousand five hundred thrifty, intelligent and hospitable people. The city is lighted by electricity and has a complete water and sewer system.

The streets are lined with trees and there are very few houses without well kept lawns, upon which are growing trees, beautiful flowering shrubs and plants. It has often been called the City of Homes.

It is a city of clean morals. No saloon has been allowed within its limits for several years. In the spring election of 1898 the proposition to allow saloons within the city limits was defeated by a vote of three to one, and in the general election of 1896 Brookings County was the banner county of the state in its vote against allowing intoxicating liquors to be sold in the state.

4. SOURCES OF INCOME. By the Congressional act under which South Dakota became a state, one hundred and sixty thousand acres of land were set aside as an endowment for the South Dakota College of Agriculture and Mechanic Arts. These



lands have all been selected; very little has yet been sold. A small amount is now being received yearly as rental from the selected lands.

No school lands can be sold for less than ten dollars per acre, so that these lands, when sold, will probably yield an endowment of two million dollars, the interest from which will be sufficient for the needs of the College.

The Morrill Act passed by Congress in 1890 provides a yearly appropriation for "the more complete endowment and support of colleges for the benefit of agriculture and mechanic arts." Under this act the College, at present, receives from the general government the sum of \$25,000 per annum.

An act making appropriation for the Department of Agriculture, approved March 4, 1907, makes provision for the further endowment and support of these colleges. As the bill was first introduced by Senator Knute Nelson, of Minnesota, the fund is popularly known as the Nelson Fund. It stipulates that the expenditure of the fund shall be governed in all respects by the provisions of the Morrill Act. "PROVIDED, That said colleges may use a portion of this money for providing courses for the special preparation of instructors for teaching the elements of agriculture and the mechanic arts." This act made an appropriation of \$5,000 for the year 1907-1908, which is increased \$5,000 each year until it reaches \$25,000 per annum.

The State Legislature makes biennial appropriations for the support of the College. At its last session about one hundred thousand dollars were appropriated for the maintenance of the institution.

5. EXPERIMENT STATION. This department was organized under the Hatch Act, passed by Congress, which provides for the establishment of agricultural experiment stations in connection with agricultural colleges, and allows \$15,000 per year for the maintenance of the same. "It shall be the object and duty of said experiment stations to conduct original researches, and verify experiments on the physiology of plants and animals,"—enumerating some twenty other lines of research—"and such other experiments bearing directly on the agricultural industry of the United States as may in each case be deemed advisable, having due regard to the varying conditions and needs of the

respective states; to aid in acquiring and diffusing among the people of the United States useful and practical information on the subjects connected with agriculture." The South Dakota station conducts its investigations principally upon the following lines: Live stock, soil, field experiments, greenhouse work, trees and small fruits, chemistry of plant growth and foods, and economic botany, entomology and zoology.

The Adams Act passed by Congress in 1906, increases the annual appropriation to agricultural experiment stations. This act carried an appropriation of \$5,000 for the first year and increases it \$2,000 each year until it reaches \$15,000 per annum. The first appropriation under this act became available July 1st, 1906.

In planning the work of the station the main object sought is to assist the agricultural interests of the state. Education is derived from this in two ways: first from the students' observation of the actual work; second, by reading the accounts and results of the work which are published in the form of bulletins and are available to anyone applying.

In order that the experiment work of the station may meet the needs of the different sections of the state where varying conditions prevail, several sub-stations have been established. Such work is now being carried on at Highmore, Eureka and Cottonwood.

---

## B--Equipment

1. CAMPUS. The college campus of thirty acres is beautifully located on an eminence within the corporate limits of Brookings. It is ornamented with choice and tasteful varieties of trees and shrubs and laid out with necessary drives and walks. Adjoining on the rear is a fifty-acre plat which is devoted to horticultural gardens and the United States forestry experiments. This portion is laid out regularly in suitably sized plats with longitudinal streets at appropriate distances apart, thus giving a beautiful and symmetrical effect to the observer from the college buildings.

2. BUILDINGS. The oldest building on the campus, a three-story brick structure called the Central Building, was completed

in 1885, and is devoted to administrative and instructional purposes. The Station Building, also a three-story building, is occupied principally by the experiment station laboratories. The North Building is a four-story brick building, the first floor of which is used as a chapel room, the two floors above furnishing quarters for the art and domestic science departments. The Chemistry and Pharmacy Building, the Drill Hall and the Creamery are all two-story buildings of modern design, and well equipped with apparatus.

The Engineering and Physics Building, the Plant Breeding Building and Greenhouse, by their substantial and imposing appearance, add much to the beauty of the campus, and furnish ample room for the departments which occupy them. Class rooms and fine laboratories are provided in the barn for work in soil, physics, agriculture and allied subjects.

A splendid brick dormitory for young women has recently been completed on a site just across the street from the campus.

The central heating and electric light plant occupies a brick structure back of the main building.

3. FARM. Set apart as the college farm is a tract of four hundred and eighty acres near the campus, about sixty acres of which are used by the Agricultural Experiment Station as an experimental farm. Here the field experiments with field crops, seed germination and soil preparation are conducted, and the student electing it can witness and actually participate in this scientific work. The remainder of the farm is used as a model stock and dairy farm under the direction of the professor of animal husbandry. Practical work and experiments involving the best farming practices for this region are given the students.

4. LABORATORIES. The work of the institution being so largely scientific in nature, well-fitted laboratories have been provided in all those departments where their use is made necessary by the most modern and approved educational methods. The farm with its equipment, together with the horticultural gardens and greenhouse, serve as a laboratory for the departments of horticulture and agriculture.

5. MUSEUMS. The idea that museums are valuable in affording illustrative material for study has obtained in the collection of the various specimens in their arrangement in the several



department museums. The zoological, botanical, geological, art and engineering departments have made especially good beginnings in getting together material for that purpose. Constant additions are being made, thereby increasing their worth as adjuncts to laboratory work. The different collections are kept in the departments to which they belong.

6. LIBRARY AND READING ROOM. The library, occupying rooms on the first floor of the Central Building, contains over 10,000 bound volumes and about 6,000 pamphlets. The institution is a repository for the government and contains a set of government publications dating from 1886. Many of the more valuable sets have been extended to an earlier date. Care has been exercised in the selection of books, in order that each department may have proper reference books at the disposal of the students. The books are arranged according to the Dewey system of classification and are completely catalogued in the card catalogue. The library also receives the cards from the government, cataloguing the bulletins of the experiment stations and the publications of the United States Department of Agriculture. The files of many standard scientific and literary periodicals are kept bound. The reading room is abundantly supplied with current periodicals and newspapers. The library is nearly all the time, day and evening, at the disposal of students for the purpose of study and reading. Someone is in charge at all times to give help and information to those using the library.

7. GYMNASIUM. The spacious gymnasium for the boys and the commodious physical culture rooms for the girls are well equipped with dumb-bells, Indian clubs, chest weights and other apparatus. Both of these departments have connected with them bath and toilet rooms of the most approved design, and the physical training is under the direction of competent instructors.

8. ATHLETIC GROUNDS. In connection with the gymnasium a tract of land is used as a place for holding outdoor exercise and sports of an athletic character. These grounds are enclosed with a high board fence, and a comfortable amphitheatre affords a large seating capacity to spectators.

9. DORMITORY. Originally the institution provided dormitories for both sexes. But the attendance has increased so



much more rapidly than the class room facilities that it has been necessary to convert the dormitories into rooms for the departments. For a period of years no living arrangements in connection with the College have been provided; but increased difficulty in securing rooms in the city induced the legislature of 1907 to make an appropriation of \$50,000 for a dormitory for the young ladies. This building was completed in the fall of 1908, and has been occupied during the past college year. For particulars concerning board in the dormitory, see paragraph 4 under "D."

10. HEATING AND LIGHTING. The buildings are all heated with steam generated in a central heating plant. This plant also furnishes steam for running the machinery in the shops and generating electricity for lighting the buildings on the campus. The College owns and controls its own electric light plant, thus making the light at all times available and economical. Some of the rooms are provided with gas, which for purpose of illumination is used in Welsbach burners, making a brilliant light.

11. POSTAL FACILITIES. The College furnishes first-class postal facilities, the mail of the students being delivered in one of the buildings at convenient times during the day, making it unnecessary for them to walk to the postoffice.

---

## **C--Administration**

1. GOVERNING BOARD.—By an act of the legislature approved March 10, 1897, provision was made for the appointment of the Regents of Education, who should have charge of all the educational institutions of the state.

The law is, "The Governor, by and with the consent of the senate, shall appoint five persons of probity and wisdom from among the best and best known citizens, residents of different portions of the state, none of whom shall reside in the counties in which any of the state educational institutions are located, who shall be designated as the Regents of Education." The terms of office of these regents, when first appointed, were of different lengths, and after the first terms, are each six years, thus making it a continuous body. Vacancies are filled by the Governor

during the recesses of the senate. "The board shall organize by electing one of their members president, and by the election of a secretary. Thus qualified and organized they shall have authority to make such rules as are necessary for their own government as a board and shall immediately assume the exclusive control and management of all the educational institutions which are maintained either wholly or in part by the State." Along this line the powers and duties of the regents are defined, among which important ones may be mentioned, to employ or dismiss members of the different faculties and other agents, to determine the proper number of teachers in said faculties, also their compensation and terms of employment, to establish departments, to settle upon courses of study, to determine the rules to be enacted for the government of students, to decide upon text books to be used, to fix tuition fees, to guard against unwise duplication of departments, to confer degrees, to control the Agricultural Experiment Station, and to promote education among the farmers by providing for institutes; in fact, to make all regulations as to the executive and instructional functions of the educational institutions of the state. The regents govern the College largely through a regents' committee.

2. FACULTY.—The faculty, consisting of the president and professors, all of whom are elected by the regents, determine in large part the general policy of the College. The professors are heads of the different departments of instruction which they represent and are responsible to the president, who is in charge of all matters of administration. The president, in turn, is responsible to the regents for the whole work of the institution. In order to aid the president in his executive duties, he appoints, at the beginning of each college year, certain faculty committees, which take up such work as may be assigned them by the president and faculty, and thus greatly facilitate the transaction of business and economize the time of the faculty.

3. STUDENT AFFAIRS.—Students are allowed wide latitude in carrying on affairs which vitally concerns themselves, such as athletic, literary, musical and social organizations. The faculty, in all these matters, retains an advisory interest and aims to assist the students in every possible way in making these elements especially helpful to the student body as a whole. In the

matter of social enjoyments the faculty is disposed to allow a reasonable amount of time for recreation, and endeavors to contribute as far as possible towards making the students happy and contented.

4. **STUDENTS' LIVING ARRANGEMENTS.**—The faculty maintains the right to pass upon the living arrangements of every non-resident student. Residents of the town with whom students are boarding or lodging are requested to co-operate with the faculty in the efforts to improve the general condition of the students by exercising over them a careful supervision and reporting to the faculty any misconduct on the part of the students which may come to their notice. Upon coming to Brookings students should report at once at the president's office, where they will be furnished all possible information with reference to living arrangements.

5. **STUDENTS' CONDUCT.**—The chief end of school life being to obtain thorough mental and moral discipline, it becomes incumbent upon the faculty to make the conditions as far as possible conducive to that attainment. No set regulations are expected to cover every contingency arising, but it is necessary that all students should recognize the fitness and importance of such restraints as are in force, and co-operate in securing their observance. In the absence of any rule applying, the student's own good judgment should suggest the proper procedure.

6. **TUTORING.**—Students absent from class or college exercises or otherwise being unable to keep up with the work of their classes, will at the suggestion of the head of the department arrange with a regular tutor of that department for assistance.

---

## **D--Special Information for Students**

1. **TIME TO ENTER.**—Students are admitted at any time and assigned to such classes as they are found best fitted to enter, but it is much better to commence at the beginning of the college year. No reduction in college fees is made when the student enters after the beginning of the term, and if a student enters later he will not under any condition be allowed to hold a class back. If a tardy beginning is imperative the student must



arrange with a tutor to assist him in bringing up his work, in order that he may go on understandingly and without hindrance to the class.

2. **TERMS AND VACATIONS.**—The college year is divided into two semesters. The principal vacation of the year occurs in the summer, from the early part of June until the middle of September. College exercises are suspended in time for students to reach home before Christmas day, the holiday recess extending over about two weeks. A spring vacation of one week is also given about the middle of the second semester. For the calendar of the college year see page 3.

3. **EXPENSES OF STUDENTS.**—No young person should be deterred from obtaining a liberal education when such advantages as this college offers can be had at a nominal price. The registration fees are six dollars per semester and are payable at the time of registration. Books and stationery are furnished by the student. A laboratory fee of two dollars per semester is charged for the use of each laboratory in which a student takes work.

By action of the regents the term tuition and incidental fees, and laboratory fees, after having been paid, will in no case be refunded; but music, dormitory and other fees may be refunded at the discretion of the president of the College, if the student is called away before the end of the term or semester by unavoidable causes.

An estimate of the yearly expenses of a student is given below in three grades, viz.:

	Low	Average	Liberal
Tuition and Incidental Fees..\$	12.00	\$ 12.00	\$ 12.00
Board and Room.....	125.00	155.00	160.00
Laundry .....	12.00	15.00	25.00
Books and Stationery.....	15.00	15.00	35.00
Laboratory Fees.....	0.00	3.00	8.00
	<hr/>	<hr/>	<hr/>
	\$ 164.00	\$ 200.00	\$ 240.00

Male students are expected to purchase uniforms, which range in cost from \$12.00 to \$18.00, and female students must furnish themselves with special costumes, which are not necessarily expensive, for use in physical culture.



Every effort is made by the officers of the institution to secure suitable and satisfactory boarding places for students and a special faculty committee has this matter in charge. The new dormitory will provide a large number of young women with comfortable homes at a reasonable cost.

Good rooms can be secured in the city at private houses or hotels for 50 cents per week and upwards. There is also many places where rooms and board can be obtained at reasonable rates. A list of approved available places for boarding or rooming can, at any time, be obtained from the president of the College. The Christian Associations make it a point at all times to assist new students in finding proper living accommodations.

4. DORMITORY.—The new dormitory for women students was completed in the fall of 1908 and has been occupied during the last college year.

This building is 120 by 50 feet in dimensions and three stories in height in addition to basement. In addition to preceptress and other lady teachers, matron and servants, it will provide a home for seventy women students.

Besides the general parlors and reception hall on the first floor, the second floor contains a general sitting room while on the third floor is a recreation hall suitable for parties and plays attended by girls only. Two bath rooms, toilet rooms and lavatories are also on each floor. In addition, each room is provided with a large closet and with stationary wash stand and hot and cold water.

Precautions have been taken to reduce danger from fire to a minimum. It is heated by steam, lighted by electricity and, in every respect, has the latest improvements and conveniences.

Each room is provided with two single cots or beds with mattress and pillow, two straight chairs, study table, dresser with mirror, rug and window shades. Bedding, towels and further articles of luxury or decoration must be provided by the students. Each girl should provide herself with mattress pad, two pairs of pillow cases, three sheets, two pairs of blankets, napins, napkin ring, six towels and a clothes bag.

The basement is provided with a large dining room, kitchen, store rooms, laundry and rooms for the help. Here a boarding club will be conducted under the supervision of an experienced

matron. Every effort will be made to provide wholesome fare at minimum cost to the students. The exact cost of board cannot now be stated, but will be about \$3.00 per week. The club will be conducted on the co-operative plan. Payment of board must be made four weeks in advance. At the end of the year any money unexpended will be returned to the students. No deduction for board will be made for less than a week's absence.

Occupants of the building will be entitled to the laundering of a limited number of articles without extra cost.

The cost of rooms in the hall varies from \$10 on the third floor to \$12 on the first floor per semester for each occupant, two in a room. This fee includes both light and heat. It is expected that two young women will occupy a room. But a student desiring to room alone may do so by paying the double rate. Each occupant will be expected to take care of her own room. The room rent is payable in advance. No deductions are made for absences and no rent money is refunded after payment.

In addition to the above fees every student who rooms in the new dormitory pays \$2.00 each semester. This money must be forwarded with the application for the room. It will be used for general maintenance and repairs.

5. STUDENT LABOR.—The terms are so distributed through the year as to give the longest period of vacation possible in the summer, thus enabling students to earn money. There is a limited amount of paid labor about the institution which can be done by students and it is the policy of the regents to give as much work to deserving students as is consistent with the best interests of all. However, no one should expect to earn his entire expenses while at college and doing school work, or be assured of an income in advance from paid labor.

6. SCHOLARSHIPS.—The following article from the law defining powers and duties of the regents of education, is self-explanatory: "The Regents of Education shall fix all rates of tuition and of other fees to be paid by students, but such rates must be the same in all the different institutions. They may receive free of tuition two students appointed by each senator and one by each representative of the state legislature in any

one of the institutions under their control, provided that the period for which appointment is made shall expire with the term of office of said senator or representative, and provided that such appointees shall comply with all the rules and requirements of the institution which they desire to enter. No student, however, shall receive any other gratuity whatever." The regents of education make this article operative in the case of this institution.

7. CO-EDUCATION.—Recognizing the value of industrial training as a feature of a practical institution for the masses, the College authorities have provided the various shops and laboratories in which the young men of the state may become familiar with the use of the different tools required in the principal mechanical industries. These special facilities are not confined to the young men, but special departments such as home economics, art and music have been established, so that the young lady students may have opportunities to fit themselves for a keener appreciation of the realities and enjoyments of life in the home, the school room, the store, the office or the factory. The young woman will profit as much by the introduction of rational methods into her education as the young man, and while the shops, studios and laboratories may be used in some instances by the young man, and in others by the young woman, they are all open to both and in most cases students of both sexes will be seen working side by side. Instead of military drill the young lady students are required to take physical culture.

8. MILITARY REQUIREMENTS.—The national law organizing and endowing these agricultural colleges requires that military science shall form part of the instruction offered. All male students taking regular work in the college are required to do certain work in this department, unless excused because of physical disability or some other grave reason. Certificates of disability should be obtained from the physician whom the College authorities have designated for such work, the College bearing the expense of the examination. For further regulations governing this work see the military department.

9. PHYSICAL CULTURE.—Physical culture is required of female students twice a week for the first three continuous years of the time they are students in the institution, or until the soph-



omore year is completed. Students taking physical culture will furnish special costumes for the same as indicated by the instructor. In regard to excuses from physical culture, the same rule holds good as in military exercises.

10. CHAPEL EXERCISES.—Chapel exercises are held on each college day and all students are cordially invited to attend. The exercises on Tuesday usually consist of announcements and an address by some competent person. Attendance on Tuesdays is required of all students.

11. PUBLIC ENTERTAINMENTS.—In all cases of public entertainments the students taking part are required to submit their exercises first to the officer regularly in charge of such work and to rehearse before the instructor in elocution at least ten days before the day of public performance, and as often as the instructor may designate.

12. STUDENT ORGANIZATIONS.—In the matter of student societies, the faculty allows the greatest freedom consistent with the general welfare. In order that students may not be led into spending too much time on such matters to the neglect of their studies, the faculty have imposed the rule that no student is to hold at the same time more than one of certain offices which may require much time and attention. Among these are the Editor-in-Chief and the Business Manager of the Collegian, the Editor-in-Chief and the Business Manager of the Junior Annual and the places on the intercollegiate debating team.

13. ATHLETIC ASSOCIATION.—Many forms of athletic exercises are practiced and are recommended and encouraged by the officers of the college. Under the auspices of the local organization and a number of college athletic associations of the state, all kinds of athletic sports are practiced and encouraged. The local representatives contest at the "State Meet" once a year for athletic honors. Students should understand, however, that their studies must receive the first consideration; and that the purpose of athletic exercise is to develop gentlemanly and lady-like qualities in those who participate in them.

14. LITERARY SOCIETIES.—A generous and fruitful rivalry for college honors exists between these societies, stimulating each to its best efforts. They are an important factor in the students' education and all are strongly advised to become members. All



preparatory students are expected to become members of the Franklin society. The work of this society is carried on under the supervision of the head of the preparatory department and has a special function as a preparation for college society work. The faculty, realizing the value of society work, has offered a trophy to be competed for by the Athenian and Miltonian Literary Societies. These societies are composed entirely of college students and meet in their respective halls on every Saturday evening.

15. CHRISTIAN ASSOCIATIONS.—In state schools the Young Men's and Young Women's Christian Associations occupy unique positions. They are the only organizations whose primary object is the moral development of the student body. Their platforms are broad enough to allow every student of whatever belief, who stands for cleanness and kindness, to affiliate himself or herself with them. The effect of belonging to such organizations, in whose membership are represented many beliefs among the students of forty nations, cannot help but be broadening and helpful; and a membership card secures the privileges of membership in every association. The purpose of the associations is to present the value of Christian living to the student, and to the state, and to create an atmosphere of good-fellowship among brotherly men and womanly women. The Young Men's Christian Association is personally supervised by the state secretary of South Dakota, who is engaged to spend half time at the South Dakota State College. The Young Women's Christian Association is supervised by the state and international college secretaries. If prospective students will write to the Young Men's or the Young Women's Christian Association, State College, Brookings, South Dakota, officers of these organizations will be glad to arrange for meeting them at the train and helping to secure boarding and rooming places.

16. ORATORICAL AND DEBATING INTERESTS.—These are represented by a board consisting of members of the faculty and students. It is the office of this board to arrange inter-society and intercollegiate debates in oratory and debating. Each year a representative selected in a preliminary contest is sent to the intercollegiate oratorical contest of the state. In order that this contestant may fully represent the college, the faculty has imposed

the requirement that those competing for this honor must be pursuing regular work for the Bachelor's degree.

17. OTHER ORGANIZATIONS.—Among other organizations may be mentioned the Athletic Association, which concerns itself with the athletic interests of the college; and technical societies, such as the Art Club, Pharmacy Club, Choral Union, Euterpe Society, etc., each occupying each own sphere of influence.

18. PRIZES.—Business and professional men of the city have taken an active interest in certain lines of college work, and in order to stimulate interest in those lines have offered prizes to be competed for annually by the students. The following prizes are offered:

Fifteen dollars, cash prize, by Mr. Horace Fishback, to the student winning first place in the local oratorical contest.

Ten dollars, cash prize, by Mr. Horace Fishback, to the student winning second place in the local oratorical contest.

Ten dollars, cash prize, by Dr. J. G. Parsons, to the student presenting the best paper upon some scientific subject. This year the subject is "The Doctrine of Evolution."

Ten dollar, cash prize, by Dr. E. C. Miller, for the most complete set of drawings on the anatomy of the cat.

Additional information concerning the prizes offered by Dr. Parsons and Dr. Miller may be obtained from the department of zoology.

19. STUDENT PUBLICATIONS.—"The Industrial Collegian" is a sixteen-page monthly magazine published by the students of the college. It aims not only to be the organ of the student body but a mirror of student life at this institution. The editorial staff is composed of the Editor-in-Chief, a Business Manager, and one member selected by each regularly organized literary society in the College. The Editor-in-Chief and Business Manager are selected by the students who are at the time of such election bona fide subscribers of the paper.

"The Jack Rabbit," an annual published by the junior class, is a good representative and an exponent of college life.

20. GENERAL CONDITIONS OF ADMISSION.—The candidate for admission to the College must be at least fourteen years of age and of good moral character. Students applying for entrance to the preparatory department must present evidence that

they have completed the work of the public schools as far as the ninth grade, and no one is allowed to pursue the work of the freshman year or higher work until grades in the preparatory years have been obtained.

21. TIME OF ENTRANCE EXAMINATIONS.—The first two days of the first semester will be devoted to examining students applying for admission, both to the College and the preparatory department.

22. ENTRANCE CONDITIONS.—A student may be admitted to the College without having passed in one or two of his entrance studies. These shall stand against him and must be cleared up within one year after entrance or the student will be required to take the subject with the regular classes.

23. CREDITS FROM EXAMINATIONS.—Students will be allowed to take examinations in any subject offered without being regular members of the class pursuing that subject, if they have standings in all the prerequisites to that subject, provided that the head of the department concerned is convinced that the subject has been covered in a satisfactory manner; and having passed in the subject, students shall receive credit therefor.

24. ADMISSION FROM OTHER INSTITUTIONS.—Students will be admitted to the College upon certificates from other reputable institutions, provided that these show that the students were honorably dismissed from those institutions, and have satisfactorily completed the work for which credit is asked. The College reserves the right, however, to cancel grades accepted from other schools should the student be found deficient in the subjects for which credit is given.

25. SPECIAL STUDENTS.—Students of mature years who have passed in the work of the preparatory department may be allowed to pursue special studies if not candidates for a degree, but they must satisfy the faculty that they are qualified to take up the studies desired.

26. SUBJECTS DEFINED.—A full subject is one which requires five periods of lecture, recitation or laboratory work per week. The lecture and recitation periods are each one hour, the laboratory periods two hours in length. The nature of a study and the number of periods per week are indicated by the small letters *a* and *b* together with numbers, written im-



mediately after the name, *a* signifying lecture or recitation work, *b*, laboratory work.

27. METHOD OF REGISTRATION.—The student should obtain a classification card in the registrar's office upon which is written the names of the subjects to be pursued, according to the rules governing classification. The classification committee of the faculty will furnish all possible assistance in classifying students. New students must also fill out and file with the registrar cards giving desired information concerning themselves. Standings from the public schools or other educational institutions should also be filed with the registrar at this time. Upon receipt of the fees for the term, the secretary of the college stamps the classification card, which is then to be presented to the different instructors under whom work is to be taken for their signatures, and in order that they may also enroll the student in their classes. This card should then be returned to the registrar. In no case should it be retained longer than three days after being issued.

No student will be allowed to classify for more than twenty hours' work unless an average standing of 85 has been maintained in the work of the preceding semester, nor for less than fifteen hours' work without special permission from the Classification Committee. Work taken under a tutor must be placed on the classification card the same as regular work, and signed for by the head of the department.

No senior who has at the beginning of the second semester more than four full subjects or their equivalent to complete for graduation will be allowed to complete the work and graduate at the end of the year.

28. GRADES.—All grades are reported to the registrar in figures on a scale of 100 as perfect. Grades are reported to students in classes as follows: Class "A," representing grades between 90 and 100. Class "B" from 80 to 90. Class "C" from 70 to 80. Classes "D" and "F" for all grades below 70. Students having a term grade of "A" may not be required to take final examination with their class. Grade "D" indicates that the student is conditioned, and may make up the work under a tutor, providing that this is done before the subject is again offered. "F" indicates that the subject in question must be repeated with a regular class before a passing grade is obtained.



In determining a final grade ordinarily twice the recitation grade is added to the final examination grade and one third of the sum is the "final grade." Large latitude is given the teacher, especially in the more advanced work, in the determination of the students' final grade.

29. **CONDITIONED STUDENTS.**—Any student who without good reason has failed to receive a passing grade in more than one full subject of the previous semester's work will be registered only conditionally for further work. And if any student at any time is not carrying the work in which he is classified at a passing grade, or fails to perform other duties which may be expected of him, he may be placed upon the conditioned list and thus debarred from certain student privileges.

30. **ATTENDANCE AND DISMISSAL.**—Students are expected to attend regularly all the exercises of the classes to which they are assigned. When a student finds it necessary to be absent he should get an excuse in advance, if possible. Otherwise he should present an excuse to the committee having this matter in charge at the time and place they may designate. Excuses will be granted only when the absence seems necessary.

Unexcused absences from classes are reported by the instructors to the registrar. Any student having more than five unexcused absences for the semester will have his case referred to a special committee for investigation. Should a student find it necessary to be late to his class he should make a satisfactory explanation at the close of the period to his instructor, otherwise the tardiness will be marked unexcused. Three unexcused tardinesses will count as an unexcused absence.

All omitted work must be made up within two weeks after return to college duties, unless the health of the student requires a longer period. This omitted work must be made up according to the direction of the instructor and at times designated by him or the tutor in charge of same. Should a student find it necessary to sever his connection with the institution before his work is completed at any time during the semester, he should report to the president his reasons and secure an honorable dismissal; otherwise no standings will be entered in the records giving him credit for the work done during the semester.

31. **CHARGES FOR TUTORING.**—The charges which tutors

are allowed for giving instruction are graded according to the nature of the work and the number of students taking work together and for single periods, the maximum length of which is one hour, are shown by the following scheme:

Number of Students.....	1	2	3	4	5	6
First year preparatory sub-						or more
jects .....	15c	25c	35c	40c	45c	50c
Second, third and fourth year						
preparatory subjects.....	20c	30c	40c	45c	50c	55c
Fresh. and soph. subjects....	25c	35c	45c	50c	55c	60c
Junior and senior subjects....	30c	40c	50c	55c	60c	65c

In the absence of instruction from the teacher as to the time a student should spend with a tutor in making up work, the tutor should see that the student covers the work which the teacher has assigned.

Students will be held responsible by the faculty for the payment of tutor fees. These must be paid to the respective heads of departments who will hand the same over to the tutors as soon as satisfactory reports concerning the work done have been received from the latter.

A student will not be allowed to take work under a tutor unless the subject in which he is doing the work is on the student's card at the time he is doing it.

Should a student be absent from an appointment which has been made with a tutor, he shall be required to pay the same fee as if he had been present.

32. DEGREES.—Students who complete the two years pharmacy course receive the degree of Pharmacy Graduate (Ph. G.).

Those who complete the full four years' course in either agriculture, horticulture, domestic science, general science, mechanical engineering, electrical engineering or civil engineering, receive the degree Bachelor of Science (B. S.) in the above specified lines of work which they pursue. For this degree the student must complete in a satisfactory manner the work of one of the schemes mentioned in paragraph 36.

The advanced degree of Master of Science (M. S.) will be conferred upon students who complete the appropriate undergraduate course in any of the above lines of study and an additional amount of work equal to ten five-hour subjects to be chosen

along appropriate lines and in not more than two departments, in each of which credit for at least four collegiate five-hour subjects has already been obtained, the advanced work to be done as prescribed by the faculty. Six or more of the subjects, constituting the "major," must be chosen from one department. At least one year of this work must be done while in residence.

In order to meet a constantly increasing demand for better equipped, and more thoroughly trained men along the several lines of engineering activities, an additional fifth year course of study is offered in the three engineering departments. Upon the completion of this additional year's work, the advanced degree, "Mechanical Engineer" (M. E.), "Electrical Engineer" (E. E.), "Civil Engineer" (C. E.), will be conferred.

This work is nearly all prescribed and is a continuation of the work pursued in the undergraduate courses, and is intended more fully to equip the student with special training along the particular line of work which he desires to pursue after leaving college.

33. SPECIAL COURSES.—The College also offers special courses in several important and practical lines of work. These are mentioned in connection with the departments principally concerned or in the description of the special short industrial courses, and are as follows:

Three years' course in the School of Agriculture.

Two years' work in pharmacy.

One year's work in business branches.

One year's work in amanuensis branches.

Five months' work in steam engineering.

Two weeks' work in dairy science.

Three months' creamery course.

Thirteen weeks' work in domestic science.

Special work in vocal and instrumental music.

Special work in art.

Lectures on poultry husbandry, two weeks.

Lectures on corn judging, two weeks.

Lectures on stock judging, two weeks.

34. SCHEMES OF STUDY.—The work leading to a Bachelor's degree may be done according to any one of the courses mapped out on the following pages. Through these the work of the

College is adapted not only to different classes of students, but to individual students themselves. The entrance requirements to each of these groups is the work of the three preparatory years.

The notation immediately after the name of a subject indicates its nature and the number of times it occurs a week, *a* referring to the class work, and *b* to the laboratory exercises. A department will not be required to give an elective unless at least five students are registered for the subject.

## Agriculture

### FRESHMAN YEAR.

#### First Semester—

Rhetoric, a 4.....	English	7
Elementary Chemistry, a & b 5.....	Chemistry	1
Plane Trigonometry, a 2.....	Mathematics	9
Stock Judging, a 4.....	Animal Husbandry	1
Military, 3.....		
Elective, a 4.....		
French, a 4.....	French	1
German, a 4.....	German	1

#### Second Semester—

Rhetoric, a 4.....	English	8
Elementary Chemistry, a & b 5.....	Chemistry	2
Surveying, b 2.....	Civil Engineering	2
Breeds of Live Stock and Stock Breeding, a 4.....	Animal Husb'd'y	2
Military, 3.....		
Elective, a 4.....		
French, a 4.....	French	2
German, a 4.....	German	2

### SOPHOMORE YEAR.

#### First Semester—

General Zoology and Physiology, a 2, b 3.....	Zoology	2
General Botany, a 2, b 3.....	Botany	1
Quantitative Chemistry, a & b 5.....	Chemistry	3
Military, 3.....		
Elective, a 4.....		
French, a 4.....	French	3
German, a 4.....	German	3



## Second Semester—

General Zoology and Physiology, a 2, b 3.....	Zoology	3
General Botany, a 2, b 3.....	Botany	2
Agricultural Chemistry, a 3.....	Chemistry	6
Genetics, a 2.....	Horticulture	2
Military, 3.....		
Elective, a 4.....		
French, a 4.....	French	4
German, a 4.....	German	4

## JUNIOR YEAR.

## First Semester—

## Animal Husbandry Group.

Advanced Rhetoric, a 2.....	English	11
History, Medieval, a 3.....	History	7
Psychology, a 3.....	Philosophy	1
General Physics, a 3, b 2.....	Physics	3
Entomology, a & b 2.....	Entomology	3
Advanced Stock Judging, a 2.....	Animal Husbandry	3
Elocution, a 1.....	Elocution	5

## Horticulture Group.

Advanced Rhetoric, a 2.....	English	11
History, Medieval, a 3.....	History	7
Psychology, a 3.....	Philosophy	1
General Physics, a 3, b 2.....	Physics	3
Entomology, a & b 2.....	Entomology	3
Pomology, a 2.....	Horticulture	1
Elocution, a 1.....	Elocution	5

## Veterinary Group.

Advanced Rhetoric, a 2.....	English	11
History, Medieval, a 3.....	History	7
Psychology, a 3.....	Philosophy	1
General Physics, a 3, b 2.....	Physics	3
Veterinary Anatomy, a & b 5.....	Veterinary	1

## Agronomy Group.

History, Medieval, a 3.....	History	7
Advanced Rhetoric, a 2.....	English	11
Psychology, a 3.....	Philosophy	1
General Physics, a 3, b 2.....	Physics	3
Soils, a & b 5.....	Agronomy	4

## Dairy Group.

Advanced Rhetoric, a 2.....	English	11
Psychology, a 3.....	Philosophy	1
General Physics, a 3, b 2.....	Physics	3
Bacteriology, a & b 5.....	Veterinary	8

---

Farm Dairying, a 2, b 1.....	Dairy	1
Elocution, a 1.....	Elocution	5

## Second Semester—

## Animal Husbandry Group.

Advanced Rhetoric, a 2.....	English	12
History, Modern, a 3.....	History	3
Ethics, a 3.....	Philosophy	2
Entomology, a & b 2.....	Entomology	4
Horse Shoing and Lameness, a 2.....	Veterinary	5
Farm Crops, a & b 5.....	Agronomy	1
Elocution, a 1.....	Elocution	6

## Horticulture Group.

Advanced Rhetoric, a 2.....	English	12
History, Modern, a 3.....	History	8
Ethics, a 3.....	Philosophy	2
Entomology, a & b 2.....	Entomology	4
Floriculture and Market Gardening, a 2.....	Horticulture	3
Farm Crops, a & b 5.....	Agronomy	1
Elocution, a 1.....	Elocution	6

## Veterinary Group.

Advanced Rhetoric, a 2.....	English	12
History, Modern, a 3.....	History	8
Ethics, a 3.....	Philosophy	2
Veterinary Anatomy, a & b 5.....	Veterinary	2
Horse Shoeing and Lameness, a 2.....	Veterinary	5
Veterinary Materia Medica, a 3.....	Pharmacy	10

## Agronomy Group.

Advanced Rhetoric, a 2.....	English	12
History, Modern, a 3.....	History	8
Ethics, a 3.....	Philosophy	2
Soils, a & b 5.....	Agronomy	5
Farm Crops, a & b 5.....	Agronomy	1

## Dairy Group.

Advanced Rhetoric, a 2.....	English	12
Ethics, a 3.....	Philosophy	2
Chemistry of Foods, a & b 5.....	Chemistry	4
Inspection and Testing of Dairy Products, a 2, b 1....	Dairy	2
Dairy Bacteriology, a 1, b 2.....	Dairy	3
Elocution, a 1.....	Elocution	6

## SENIOR YEAR.

## First Semester—

## Animal Husbandry Group.

Political Economy, a 3.....	History	11
Geology, a 5.....	Agronomy	11

Veterinary Medicine, a 5.....	Veterinary	6
Stock Feeding and Management, a 2.....	Animal Husbandry	6
Farm Dairying.....	Dairy	1

#### Horticulture Group.

Political Economy, a 3.....	History	11
Geology, a 5.....	Agronomy	11
Soils, a & b 5.....	Agronomy	4
Plant Anatomy and Physiology, a 1, b 2.....	Botany	3
Mycology and Plant Pathology, b 2.....	Botany	4

#### Veterinary Group.

Political Economy, a 3.....	History	11
Histology, a & b 5.....	Zoology	6
Veterinary Medicine, a 5.....	Veterinary	6
Veterinary Anatomy, a & b 5.....	Veterinary	3

#### Agronomy Group.

Political Economy, a 3.....	History	11
Geology, a 5.....	Agronomy	11
Entomology, a & b 2.....	Entomology	3
Stock Feeding and Management, a 2....	Animal Husbandry	6
Farm Crops, a 1.....	Agronomy	3
Plant Anatomy and Physiology, a 1, b 2.....	Botany	3
Mycology and Plant Physiology, b 2.....	Botany	4

#### Dairy Group.

Political Economy, a 3.....	History	11
Medieval History, a 3.....	History	7
Industrial Chemistry, a 3.....	Chemistry	7
Stock Feeding and Management, a 2.....	Animal Husbandry	6
Veterinary Medicine, a 5.....	Veterinary	6
Dairy Technology, a 2.....	Dairy	7

### Second Semester—

#### Animal Husbandry Group.

Sociology, a 3.....	History	12
Veterinary Medicine, a 5.....	Veterinary	7
Stock Feeding and Management, a 3.....	Animal Husbandry	7
Farm Mechanics, a 2.....	Agronomy	6
Farm Management, a 3.....	Agronomy	7
Forestry, a 3.....	Horticulture	4

#### Horticulture Group.

Sociology, a 3.....	History	12
Taxonomy, a 2, b 3.....	Botany	5
Soils, a & b 5.....	Agronomy	5
Farm Mechanics, a 2.....	Agronomy	6
Landscape Gardening, a 1, b 1.....	Horticulture	5

**Veterinary Group.**

Sociology, a 3.....	History	12
Histology, a & b 5.....	Zoology	7
Veterinary Medicine, a 5.....	Veterinary	7
Veterinary Anatomy, a & b 5.....	Veterinary	4

**Agronomy Group.**

Sociology, a 3.....	History	12
Taxonomy, a 2, b 3.....	Botany	5
Farm Management, a 3.....	Agronomy	7
Farm Mechanics, a 2.....	Agronomy	6
Entomology, a & b 2.....	Entomology	4
Farm Crops, a 3.....	Agronomy	2

**Dairy Group.**

Sociology, a 3.....	History	12
History, Modern, a 3.....	History	8
Stock Feeding and Management, a 3.....	Animal Husbandry	7
Operation of Creameries, a 3, b 2.....	Dairy	4
Dairy Farm Management, a 2, b 1.....	Dairy	6
Dairying, a 2, b 1.....	Dairy	5

---

## Home Economics

---

**FRESHMAN YEAR.****First Semester—**

Rhetoric, a 4.....	English	7
Food and Dietetics, a 4, b 1.....	Home Economics	1
Elementary Chemistry, a & b 5.....	Chemistry	1
Physical Culture, 2.....		
Elective, a 4.....		
French, a 4.....	French	1
German, a 4.....	German	1
Latin, a 4.....	Latin	5

**Second Semester—**

Rhetoric, a 4.....	English	8
Sewing, b 3.....	Domestic Art	3
Elementary Chemistry, a & b 5.....	Chemistry	2
Theory of Design a 2.....	Art	3
Physical Culture, 2.....		
Elective, a 4.....		
French, a 4.....	French	2
German, a 4.....	German	2
Latin, a 4.....	Latin	6



## SOPHOMORE YEAR.

## First Semester—

Chaucer and History of the English Language, a 4.....	English	9
Quantitative Chemistry, a & b 5.....	Chemistry	3
General Botany, a 2, b 3.....	Botany	1
Physical Culture, 2.....		
Elective, a 4.....		
French, a 4.....	French	3
German, a 4.....	German	3
Latin, a 4.....	Latin	7

## Second Semester—

The Elizabethan Drama, a 4.....	English	10
Chemistry of Foods, a & b 5.....	Chemistry	4
General Botany, a 2, b 3.....	Botany	2
Physical Culture, 2.....		
Elective, a 4.....		
French, a 4.....	French	4
German, a 4.....	German	4
Latin, a 4.....	Latin	8

## JUNIOR YEAR.

## First Semester—

Advanced Rhetoric, a 2.....	English	11
History, Medieval, a 3.....	History	7
General Zoology and Physiology, a 2, b 3.....	Zoology	2
Bacteriology, a & b 5.....	Veterinary	8
Psychology, a 3.....	Philosophy	1

## Second Semester—

Advanced Rhetoric, a 2.....	English	12
History, Modern, a 3.....	History	8
Ethics, a 3.....	Philosophy	2
General Zoology and Physiology, a 2, b 3.....	Zoology	3
Application of Heat to Foods, a 3, b 2.....	Home Economics	3

## SENIOR YEAR.

## First Semester—

Political Economy, a 3.....	History	11
Art History, a 2.....	Art	6
The House, a 2.....	Home Economics	7
Home Nursing and Invalid Cookery, a 3.....	Home Economics	5
Household Sanitation, a 3.....	Home Economics	4
Elective, a 3.....		
English Literature, from 1625 to 1800, a 3.....	English	13
American History (1783-1829), a 3.....	History	9
French, a 3.....	French	5
German, a 3.....	German	5
Latin, a 3.....	Latin	9

History of Education, a 3.....	Philosophy	3
History of Music, a 3.....	Music	7
Theory of Interpretation and Musical Forms, a 2....	Music	6
Nature Study, a 3.....	Entomology	8
Plant Anatomy and Physiology, a 1, b 2.....	Botany	3
Mycology and Plant Pathology, b 2.....	Botany	4

**Second Semester—**

Sociology, a 3.....	History	12
Astronomy, a 4.....	Mathematics	15
Art History, a 2.....	Art	7
Original Investigation, b 2.....	Home Economics	9
Elective, a 5.....		
Nineteenth Century Poetry, a 3.....	English	14
American History (1829-1865), a 3.....	History	10
French, a 3.....	French	6
German, a 3.....	German	6
Latin, a 3.....	Latin	10
Principles of Education, a 3.....	Philosophy	4
History of Music, a 3.....	Music	10
Theory of Interpretation and Musical Forms, a 2....	Music	9
Teaching of Home Economics, a 2.....	Home Economics	8
Taxonomy, a 2, b 3.....	Botany	5

---

## Mechanical Engineering

---

**FRESHMAN YEAR.****First Semester—**

Rhetoric, a 4.....	English	7
Solid Geometry, a 3.....	Mathematics	7
Plane Trigonometry, a 2.....	Mathematics	9
Elementary Chemistry, a & b 5.....	Chemistry	1
Mechanical Drawing, b 5.....	Mechanical Engineering	5
Military, 3.....		

**Second Semester—**

Rhetoric, a 4.....	English	8
Advanced Algebra, a 3.....	Mathematics	8
Plane and Spherical Trigonometry, a 2.....	Mathematics	10
Elementary Chemistry, a & b 5.....	Chemistry	2
Machine Shop, b 3.....	Mechanical Engineering	3
Surveying, b 2.....	Civil Engineering	2
Military, 3.....		

## SOPHOMORE YEAR.

## First Semester—

Analytic Geometry and Calculus, a 5.....	Mathematics	11
General Physics, a 3, b 2.....	Physics	3
French, a 4.....	French	1
Machine Shop, b 5.....	Mechanical Engineering	4
Military, 3.....		

## Second Semester—

Calculus, a 5.....	Mathematics	12
General Physics, a 3, b 2.....	Physics	4
French, a 4.....	French	2
Descriptive Geometry, a 1, b 2.....	Mechanical Engineering	7
Machine Design, b 2.....	Mechanical Engineering	8
Military, 3.....		

## JUNIOR YEAR.

## First Semester—

Electricity and Magnetism, a 3, b 1....	Electrical Engineering	1
Analytic Mechanics, a 5.....	Mathematics	13
Elements of Mechanism, a 3.....	Mechanical Engineering	10
Machine Design, b 4.....	Mechanical Engineering	9
Advanced Rhetoric, a 2.....	English	11

## Second Semester—

Steam Engines and Thermodynamics, a 5.....		
.....	Mechanical Engineering	12
Dynamo Electric Machinery, a 3, b 2..	Electrical Engineering	3
Mechanics of Materials, a 3.....	Mechanical Engineering	16
Gas and Oil Engines, a 2.....	Mechanical Engineering	11
Advanced Rhetoric, a 2.....	English	12

## SENIOR YEAR.

## First Semester—

Political Economy, a 3.....	History	11
Steam Boilers, a 2.....	Mechanical Engineering	13
Experimental Engineering, b 2.....	Mechanical Engineering	17
Engineering Design, b 5.....	Mechanical Engineering	19
Hydraulics, a 3.....	Civil Engineering	5
Contracts and Specifications, a 2.....	Civil Engineering	12
Power Transmission and Measurement, a 2		
.....	Mechanical Engineering	23

## Second Semester—

General Astronomy, a 4.....	Mathematics	15
Strains in Framed Structures, a 3....	Mechanical Engineering	15
Experimental Engineering, b 2.....	Mechanical Engineering	18
Engineering Design, b 3.....	Mechanical Engineering	20
Masonry and Foundations, a 2.....	Civil Engineering	9

## Electrical Engineering

---

### FRESHMAN YEAR.

#### First Semester—

Rhetoric, a 4.....	English	7
Solid Geometry, a 3.....	Mathematics	7
Plane Trigonometry, a 2.....	Mathematics	9
Elementary Chemistry, a & b 5.....	Chemistry	1
Mechanical Drawing, b 5.....	Mechanical Engineering	5
Military, 3.....		

#### Second Semester—

Rhetoric, a 4.....	English	8
Advanced Algebra, a 3.....	Mathematics	8
Plane and Spherical Trigonometry, a 2.....	Mathematics	10
Elementary Chemistry, a & b 5.....	Chemistry	2
Machine Shop, b 3.....	Mechanical Engineering	3
Surveying, b 2.....	Civil Engineering	2
Military, 3.....		

### SOPHOMORE YEAR.

#### First Semester—

Analytic Geometry and Calculus, a 5.....	Mathematics	11
General Physics, a 3, b 2.....	Physics	3
French, a 4.....	French	1
Machine Shop, b 5.....	Mechanical Engineering	4
Military, 3.....		

#### Second Semester—

Calculus, a 5.....	Mathematics	12
General Physics, a 3, b 2.....	Physics	4
French, a 4.....	French	2
Descriptive Geometry, a 1, b 2.....	Mechanical Engineering	7
Machine Design, b 2.....	Mechanical Engineering	8
Military, 3.....		

### JUNIOR YEAR.

#### First Semester—

Analytic Mechanics, a 5.....	Mathematics	13
Electricity and Magnetism, a 3, b 1.....	Electrical Engineering	1
Elements of Mechanism, a 3.....	Mechanical Engineering	10
Machine Design, b 4.....	Mechanical Engineering	9
Telephone Engineering, a 2.....	Electrical Engineering	2
Advanced Rhetoric, a 2.....	English	11



**Second Semester—**

Steam Engines and Thermodynamics, a 5..	Mech. Engineering	12
Electro-Chemistry, a 3, b 1.....	Chemistry	8
Dynamo Electric Machinery, a 3, b 2....	Electrical Engineering	3
Mechanics of Materials, a 3.....	Mechanical Engineering	16
Advanced Rhetoric, a 2.....	English	12

**SENIOR YEAR.****First Semester—**

Political Economy, a 3.....	History	11
Steam Boilers, a 2.....	Mechanical Engineering	13
Experimental Engineering, b 2.....	Mechanical Engineering	17
Alternating Currents, a 3, b 2.....	Electrical Engineering	4
Dynamo Design, b 3.....	Electrical Engineering	5
Hydraulics, a 3.....	Civil Engineering	5
Contracts and Specifications, a 2.....	Civil Engineering	12

**Second Semester—**

General Astronomy, a 4.....	Mathematics	15
Electric Light and Power Distribution, a 3, b 2.....	Electrical Engineering	6
Experimental Engineering, b 2.....	Mechanical Engineering	18
Gas and Oil Engines, a 2.....	Mechanical Engineering	11
Masonry and Foundations, a 2.....	Civil Engineering	9

---

## Civil Engineering

---

**FRESHMAN YEAR.****First Semester—**

Rhetoric, a 4.....	English	7
Solid Geometry, a 3.....	Mathematics	7
Plane Trigonometry, a 2.....	Mathematics	9
Elementary Chemistry, a & b 5.....	Chemistry	1
Mechanical Drawing, b 5.....	Mechanical Engineering	5
Military, 3.....		

**Second Semester—**

Rhetoric, a 4.....	English	8
Advanced Algebra, a 3.....	Mathematics	8
Plane and Spherical Trigonometry, a 2.....	Mathematics	10
Elementary Chemistry, a & b 5.....	Chemistry	2
Surveying, a & b 5.....	Civil Engineering	1
Military, 3.....		

## SOPHOMORE YEAR.

## First Semester—

Analytic Geometry and Calculus, a 5.....	Mathematics	11
General Physics, a 3, b 2.....	Physics	3
French, a 4.....	French	1
Surveying, a 2, b 3.....	Civil Engineering	3
Military, 3.....		

## Second Semester—

Descriptive Geometry, a 1, b 2.....	Mechanical Engineering	7
Calculus, a 5.....	Mathematics	12
General Physics, a 3, b 2.....	Physics	4
French, a 4.....	French	2
Topographical Surveying, a & b 2.....	Civil Engineering	4
Military, 3.....		

## JUNIOR YEAR.

## First Semester—

Analytic Mechanics, a 5.....	Mathematics	13
Elements of Mechanism, a 3.....	Mechanical Engineering	10
Hydraulics, a 3.....	Civil Engineering	5
Machine Design, b 4.....	Mechanical Engineering	9
Advanced Rhetoric, a 2.....	English	11

## Second Semester—

Geodesy, a & b 3.....	Civil Engineering	6
Mechanics of Materials, a 3.....	Mechanical Engineering	16
Water Supply, a 2.....	Civil Engineering	7
Irrigation, a 2.....	Civil Engineering	8
Masonry and Foundations, a 2.....	Civil Engineering	9
Advanced Rhetoric, a 2.....	English	12
Elective, 5.....		

## SENIOR YEAR.

## First Semester—

Political Economy, a 3.....	History	11
Sewerage, a 2.....	Civil Engineering	10
Roads and Pavements, a 2.....	Civil Engineering	11
Electricity and Magnetism, a 3, b 1....	Electrical Engineering	1
Experimental Engineering, b 2.....	Mechanical Engineering	17
Geology, a 5.....	Agronomy	9
Contracts and Specifications, a 2.....	Civil Engineering	12

## Second Semester—

Experimental Engineering, b 2.....	Mechanical Engineering	18
General Astronomy, a 4.....	Mathematics	15
Strains in Framed Structures, a 3....	Mechanical Engineering	15
Railroad Engineering, a 1, b 2.....	Civil Engineering	13
Dam and Reservoir Design, b 2.....	Civil Engineering	14
Elective, 5.....		

## Fifth Year Subjects for Engineering Degrees

---

### MECHANICAL ENGINEERING

#### First Semester—

Alternating Currents, a 3, b 2.....	Electrical Engineering	4
Statics, a 2.....	Mechanical Engineering	24
Structural Design, b 3.....	Mechanical Engineering	21
Thesis, a 2.....	Mechanical Engineering	26
*Elective, 5.....		

#### Second Semester—

Kinematics, b 2.....	Mechanical Engineering	14
Heating and Ventilation, a 2.....	Mechanical Engineering	25
Railroad Engineering, a 1, b 2.....	Civil Engineering	13
Structural Engineering, b 2.....	Mechanical Engineering	22
Thesis, a & b 3.....	Mechanical Engineering	27
*Elective, 5.....		

### ELECTRICAL ENGINEERING

#### First Semester—

Polyphase Currents, a 3, b 2.....	Electrical Engineering	7
Power Transmission and Measurement, a 2.....		
.....	Mechanical Engineering	23
Electrical Design, b 3.....	Electrical Engineering	8
Thesis, a 2.....	Electrical Engineering	11
*Elective, 5.....		

#### Second Semester—

Design of Power Stations, a 3, b 2.....	Electrical Engineering	9
Installation and Testing of Power Plants, a 2, b 1.....		
.....	Electrical Engineering	10
Railroad Engineering, a 1, b 2.....	Civil Engineering	13
Thesis, a 3.....	Electrical Engineering	12
*Elective, a & b 5.....		

### CIVIL ENGINEERING

#### First Semester—

Structural Design, a & b 5.....	Civil Engineering	15
Hydraulic Motors, a 3.....	Civil Engineering	17
Reinforced Concrete, a 3.....	Civil Engineering	18
Thesis, a 2.....	Civil Engineering	19
*Elective, 5.....		

#### Second Semester—

Structural Design, b 3.....	Civil Engineering	16
Steam Engines, a 3.....	Mechanical Engineering	12

---

Kinematics, b 2.....	Mechanical Engineering	14
Dynamo Electric Machinery, a 3, b 2....	Electrical Engineering	3
Thesis, a & b 3.....	Civil Engineering	20
*Elective, 2.....		

---

\*All Electives must be taken from one of the Engineering Departments.

---

## General Science

---

### FRESHMAN YEAR.

#### First Semester—

Rhetoric, a 4.....	English	7
Elementary Chemistry, a & b 5.....	Chemistry	1
Military, 3, Physical Culture, 2.....		
Elective, a 9.....		
French, a 4, or.....	French	1
German, a 4, or.....	German	1
Latin, a 4.....	Latin	5
Food and Dietetics, a 4, b 1 or.....	Home Economics	1
Solid Geometry, a 3, and.....	Mathematics	7
Plane Trigonometry, a 2.....	Mathematics	9
One, and only one, language must be elected.		

#### Second Semester—

Rhetoric, a 4.....	English	8
Elementary Chemistry, a & b 5.....	Chemistry	2
Military, 3, Physical Culture, 2.....		
Elective, a & b 9.....		
French, a 4 or.....	French	2
German, a 4 or.....	German	2
Latin, a 4.....	Latin	6
Household Economy, a 3 and.....	Home Economics	6
Textiles, a 2.....	Home Economics	2
Or two of the three following subjects:		
Surveying, b 2.....	Civil Engineering	2
Plane and Spherical Trigonometry, a 2.....	Mathematics	10
Advanced Algebra, a 3.....	Mathematics	8
One, and only one, language must be elected.		

### SOPHOMORE YEAR.

#### First Semester—

Chaucer and History of the English Language, a 4....	English	9
*General Zoology and Physiology, a 2, b 3.....	Zoology	2



Military, 3.....	
Elective, a & b 9.....	
French, a 4, or.....	French 3
German, a 4, or.....	German 3
Latin, a 4.....	Latin 7
General Botany, a 2, b 3.....	Botany 1
Analytic Geometry and Calculus, a 5.....	Mathematics 11
Quantitative Chemistry, a & b 5.....	Chemistry 3
Elocution, a 5.....	Elocution 1
General Physics, a 3, b 2.....	Physics 3
One, and only one, language must be elected.	

### Second Semester—

The Elizabethan Drama, a 4.....	English 10
*General Zoology and Physiology, a 2, b 3.....	Zoology 3
Military, 3.....	
Elective, a & b 9.....	
French, a 4, or.....	French 4
German, a 4, or.....	German 4
Latin, a 4.....	Latin 8
General Botany, a 2, b 3.....	Botany 2
Calculus, a 5.....	Mathematics 12
Volumetric Analysis and Drug Assaying, a & b 5.....	
.....	Pharmacy 9
Elocution, a 5.....	Elocution 2
General Physics, a 3, b 2.....	Physics 4
One, and only one, language must be elected.	

### JUNIOR YEAR.

#### First Semester—

Advanced Rhetoric, a 2.....	English 11
History, Medieval, a 3.....	History 7
Psychology, a 3.....	Philosophy 1
General Physics, a 3, b 2.....	Physics 3
Elective, a & b 3.....	
Elocution, a 3.....	Elocution 3
Mechanical Drawing, b 3.....	Mechanical Engineering 5
American History (1783-1829), a 3.....	History 9
English Literature from 1625 to 1800, a 3.....	English 13
French, a 3.....	French 5
German, a 3.....	German 5
Latin, a 3.....	Latin 9
Histology, a & b 5.....	Zoology 6
Industrial Chemistry, a 3.....	Chemistry 7
Advanced Physics, a 4, b 1.....	Physics 5
Nature Study, a 3.....	Entomology 8
Plant Anatomy and Physiology, a 2, b 3.....	Botany 3
Mycology and Plant Pathology, b 2.....	Botany 4

## Second Semester—

Advanced Rhetoric, a 2.....	English	12
History, Modern, a 3.....	History	8
Ethics, a 3.....	Philosophy	2
General Physics, a 3, b 2.....	Physics	4
Elective, a & b 3.....		
Elocution, a 3.....	Elocution	4
Architectural Drawing, b 3.....	Mechanical Engineering	6
American History (1829-1865), a 3.....	History	10
Nineteenth Century Poetry, a 3.....	English	14
French, a 3.....	French	6
German, a 3.....	German	6
Latin, a 3.....	Latin	10
Histology, a & b 5.....	Zoology	7
Agricultural Chemistry, a 3.....	Chemistry	6
Genetics, a 2.....	Horticulture	2
Advanced Physics, a 4, b 1.....	Physics	6
Taxonomy, a 2, b 3.....	Botany	5

## SENIOR YEAR.

## First Semester—

Political Economy, a 3.....	History	11
Geology, a 5.....	Agronomy	9
Elective, a & b 9.....		
Advanced Physics, a 4, b 1.....	Physics	5
Architectural Design, b 5.....	Mechanical Engineering	6a
American Government.....	History	13
Nineteenth Century Prose, a 5.....	English	15
Materia Medica, a 5.....	Pharmacy	2
Analytic Mechanics, a 5.....	Mathematics	13
Art History, a 2.....	Art	6
Theory and Practice of Design, a & b 5.....	Art	4
History of Education, a 3.....	Philosophy	3
History of Music, a 3.....	Music	7
Theory of Interpretation and Musical Forms, a 2....	Music	6
Comparative Anatomy of Vertebrates, a & b 5....	Zoology	10
Bacteriology, a & b 5.....	Veterinary	8
Agricultural Analysis, a & b 5.....	Chemistry	5
Heat, a 3, b 1.....	Physics	7
Cytology and Botanical Methods, a 1, b 4.....	Botany	6
Nature Study, a 3.....	Entomology	8

## Second Semester—

Sociology, a 3.....	History	12
General Astronomy, a 4.....	Mathematics	15
Elective, a & b 9.....		
Advanced Physics, a 4, b 1.....	Physics	6
Perspective, b 5.....	Mechanical Engineering	6b

---

American Government, a 3.....	History	14
Nineteenth Century History, a 2.....	History	16
The Civil War and Reconstruction Era, a 2.....	History	18
Nineteenth Century Prose, a 5.....	English	16
Materia Medica, a 5.....	Pharmacy	3
Analytic Mechanics, a 5.....	Mathematics	14
Art History, a 2.....	Art	7
Theory and Practice of Design, a & b 5.....	Art	5
Principles of Education, a 3.....	Philosophy	4
History of Music, a 3.....	Music	10
Theory and Interpretation and Musical Forms, a 2..	Music	9
Comparative Anatomy of Vertebrates, a & b 5....	Zoology	11
Chemistry of Foods, a & b 5.....	Chemistry	4
Light, a 3, b 1.....	Physics	8
Oytology and Botanical Methods, a 1, b 4.....	Botany	7

---

\*Students who intend to elect advanced work in Physics should take Physics 3 and 4 during the sophomore year and Zoology 2 and 3 during the junior year. Young ladies following the General Science scheme may elect Home Economics 4 and 7 in place of Physics 3, and Home Economics 3 in place of Physics 4.

---

## Pharmacy

---

### FRESHMAN YEAR.

#### First Semester—

Rhetoric, a 4.....	English	7
Elementary Chemistry, a & b 5.....	Chemistry	1
Solid Geometry, a 3.....	Mathematics	7
Plane Trigonometry, a 2.....	Mathematics	9
Military, 3.....		
Elective, a 4.....		
French, a 4 or.....	French	1
German, a 4, or.....	German	1
Latin, a 4.....	Latin	5

#### Second Semester—

Rhetoric, a 4.....	English	8
Elementary Chemistry, a & b 5.....	Chemistry	2
Advanced Algebra, a 3.....	Mathematics	8
Elementary Law, a 3.....	Commercial Science	9
Military, 3.....		
Elective, a 4.....		

---

French, a 4, or.....	French	2
German, a 4, or.....	German	2
Latin, a 4.....	Latin	6

## SOPHOMORE YEAR.

## First Semester—

Chaucer, History of the English Language, a 4.....	English	9
General Botany, a 2, b 3.....	Botany	1
General Physics, a 3, b 2.....	Physics	3
Military, 3.....		
Elective, a 4.....		
French, a 4, or.....	French	3
German, a 4, or.....	German	3
Latin, a 4.....	Latin	7

## Second Semester—

The Elizabethan Drama, a 4.....	English	10
General Botany, a 2, b 3.....	Botany	2
General Physics, a 3, b 2.....	Physics	4
Military, 3.....		
Elective, a 4.....		
French, a 4, or.....	French	4
German, a 4, or.....	German	4
Latin, a 4.....	Latin	8

## JUNIOR YEAR.

## First Semester—

Anatomical Methods, a 3, b 2.....	Zoology	4
Quant. Chemistry, a & b 5.....	Chemistry	3
Pharmacy Latin, a 5.....	Pharmacy	1
Medieval History, a 3.....	History	7

## Second Semester—

Anat. Methods & Physiology, a 3, b 2.....	Zoology	5
Chemistry of Foods, a & b 5.....	Chemistry	4
Pharmacognosy, a & b 5.....	Botany	8
Modern History, a 3.....	History	8

## SENIOR YEAR.

## First Semester—

Materia Medica, a 5.....	Pharmacy	2
Pharmacy, a 5.....	Pharmacy	4
Pharmacy Laboratory, b 3.....	Pharmacy	5
Pharmaceutical Problems, a 2.....	Pharmacy	6
Bacteriology, a & b 5.....	Veterinary	8

## Second Semester—

Materia Medica, a 5.....	Pharmacy	3
Pharmacy, a 5.....	Pharmacy	7



---

Pharmacy Laboratory, b 5.....	Pharmacy	8
Volumetric Anal. & Drug Assaying, a & b 5.....	Pharmacy	9

---

## Two Year Course in Pharmacy

---

### FIRST YEAR.

#### First Semester—

Elementary Chemistry, a & b 5.....	Chemistry	1
General Botany, a 2, b 3.....	Botany	1
Anatomical Methods, a 3, b 2.....	Zoology	4
Pharmacy Latin, a 5.....	Pharmacy	1

#### Second Semester—

Elementary Chemistry, a & b 5.....	Chemistry	2
General Botany, a 2, b 3.....	Botany	2
Anatomical Methods and Physiology, a 3, b 2.....	Zoology	5
Pharmacognosy, a & b 5.....	Botany	5

### SECOND YEAR.

#### First Semester—

Materia Medica, a 5.....	Pharmacy	2
Pharmacy, a 5.....	Pharmacy	4
Quantitative Chemistry, a & b 5.....	Chemistry	3
Pharmacy Laboratory, b 3.....	Pharmacy	5
Pharmaceutical Arithmetic, a 2.....	Pharmacy	6

#### Second Semester—

Materia Medica, a 5.....	Pharmacy	3
Pharmacy, a 5.....	Pharmacy	7
Volumetric Analysis and Drug Assaying, a & b 5....	Pharmacy	9
Pharmacy Laboratory, b 5.....	Pharmacy	8

## DEPARTMENTS AND WORK

### The Agricultural Experiment Station

JAMES W. WILSON, DIRECTOR.

Under the provisions of the Hatch Act of March 2, 1887, and the Adams Act of March 20, 1906, the state received during the fiscal year of 1908-1909 \$26,000 from the treasury of the United States for the maintenance of an experiment station. By an act of the legislature this institution was made a part of the South Dakota Agricultural College. Its object is to investigate along agricultural lines, publish the results in bulletin form and distribute them to the residents of the state for their information and benefit. It consists of eight divisions, namely, agronomy, animal husbandry, dairy, horticulture, chemistry, botany, entomology and veterinary.

Each of these divisions is in charge of an expert who is also professor of the same subject in the college.

About sixty acres of the college farm are set aside for experiments in crop rotations and testing varieties of grains.

Another sixty acres are utilized for experiments along horticultural lines, where trees, shrubs and vines are grown in profusion. Adaptation of grains, grasses, forage plants, fruits, trees, shrubs and vegetables for the Northwest, is being carried on in co-operation with the United States Department of Agriculture and as a result many valuable varieties have been introduced which probably would not otherwise have reached us.

Each division is provided by the State with the proper facilities to conduct investigations, and at least four bulletins are published annually, which are free to the residents of the state. Queries pertaining to the various agricultural interests are answered promptly. The regular bulletin mailing list of the station numbers over 15,000 names.

In addition to the above, the state legislature of 1907 appropriated ten thousand dollars for the Forage Testing Station

at Highmore, which institution is a sub-station of this experiment station. Eight thousand dollars of this money was used for the erection of buildings and two thousand dollars for maintenance.

The legislature also passed a law for the establishment of three other sub-stations in the western part of the state and set aside the revenue derived from 25,000 acres of land for the maintenance of the same.

All communications to this department should be addressed to the Director.

---

## **Department of Animal Husbandry**

PROFESSOR WILSON, MR. JOSEPH.

The instruction given in this department is made as practical as possible. The college herds and flocks include representatives of sixteen of the leading breeds of domestic animals. Practical work is given daily in score card practice to enable the student to distinguish between the poor and the good and between the good and the fancy kinds of animals. Many requests are made upon this department for judges of live stock at our district and county fairs.

The following work is offered:

1. Stock Judging. Four recitations a week, first semester; required in the freshman year of the Agriculture Course. Study and practice in judging market types of horses, cattle, sheep and swine. Text: Craig's Judging Live Stock.

2. Breeds of Live Stock. Four recitations a week, second semester; required in the freshman year of the Agriculture Course. A study of the various breeds, their origin, development, characteristics and adaptability to different climates. Text: Plumb's Types and Breeds of Farm Animals.

3. Advanced Stock Judging. Two recitations a week first semester; required in the junior year of the animal husbandry group of the Agriculture Course, prerequisite, Animal Husbandry 1 and 2. Particular attention is given to show yard work.

4. Principles of Animal Breeding. Three recitations a week, second semester; offered in the junior year; prerequisite, Animal Husbandry 2.

5. **Animal Nutrition.** Three recitations a week, first semester; offered in the junior year; prerequisite, Chemistry 2. A study of the laws and principles of animal nutrition. The physical and chemical characteristics of the various feeding stuffs and their relation to practical feeding operations. Text: Jordan's *Feeding of Animals*.

6. **Stock Feeding and Management.** Two recitations a week, first semester; required in the senior year in the animal husbandry group of the Agriculture Course; prerequisite, Animal Husbandry 5. A study of the feeding and management of the various classes of live stock and station investigation and results. Text: Henry's *Feeds and Feeding*, with references.

7. **Stock Feeding and Management.** Three recitations a week, second semester; required in the senior year of the animal husbandry and dairy groups of the Agriculture Course. Continuation of Animal Husbandry 6.

---

## Department of Dairy Husbandry

PROFESSOR LARSEN, MR. LUND.

This department offers three separate courses: (1) the Four Years Agriculture Course, the last one and a half years of which are devoted chiefly to special dairy studies; (2) the Three Months Dairy Course, and (3) the Two Weeks Winter Creamery Course.

The first course has been outlined with a special view of fitting young men to become teachers and investigators of dairying in public schools, agricultural colleges and experiment stations, inspectors of creameries and dairy products in municipal, state and government service and superintendents of large creameries and dairy farms.

The second course is given with a view of training men to become successful operators of creameries, cheese factories, central plants and dairy farms.

The third or Two Weeks Winter Course, is offered to fulfill demands of experienced creamery men who cannot leave their work to attend a longer dairy course. The course aims to keep the practical men in touch with new ideas and principles and to emphasize only such phases of the work as the students



demand. Considerable latitude in the work is allowed students taking this course.

The demand for good men properly trained along dairy lines is great. Compensation for dairy and creamery work is good. Worthy students can depend upon the co-operation of this department in securing suitable work.

The Dairy Husbandry Department operates on a commercial basis a well equipped creamery and cheese factory all the year around. It is a two-story brick building. The first floor is occupied with the various creamery machinery and cheesemaking equipments. On the second floor, the research laboratory, milk inspection laboratory, class rooms and offices are located.

The dairy herd, consisting of representatives of the principal dairy breeds, which is kept in a separate dairy barn, affords excellent facilities for studying the various phases of milk production.

Experiments relating to feeding, breeding and care of dairy stock, and the manufacture of dairy products are in progress at all times. Students may have advantage of keeping in touch with these experiments, note manners of outlining and executing investigational work, and profit from results. Advanced worthy dairy students may arrange to assist in some of this work.

The following work is offered:

1. **Farm Dairying.** Two lectures and one laboratory period a week, first semester; required in the junior year of the dairy group, in the senior year of the animal husbandry group, Agriculture Course, and with slight modification during the first year of the School of Agriculture.

This subject comprises a study of the production, secretion, composition, physical and chemical properties of milk; of the comparative economy in disposing of and utilizing milk for various purposes on the farm, of testing milk and its products for fat, acid and common adulterations; of the effects of germs and degree of purity on dairy products; of the separating and handling of milk and cream and the manufacture of butter and cheese on the farm.

2. **Inspection and Testing of Dairy Products.** Two lectures and one laboratory period a week, second semester; required in the junior year of the dairy group, Agriculture Course.

Those taking this course should have had at least one terms' work in chemistry. It embodies a thorough study of the Babcock test for fat, of the lactometer and its application, of the tests for determining acidity of dairy products, of the various tests for mois-

ture in butter, of the influence and detection of different preservatives and adulterations, and a study of the various pure dairy food standards.

3. Dairy Bacteriology. One lecture and two laboratory periods a week, second semester; required in the junior year of the dairy group, Agriculture Course.

In this course are taught bacteriological principles as related to dairying, contamination of milk, fermentations of milk and their control, relation of disease bacteria to milk, preservation of milk for commercial purposes, bacteria as related to the manufacture of butter, and bacteria as related to the manufacture of cheese. General bacteriology is recommended as a prerequisite study.

4. Operation of Creameries. Three lectures and two laboratory periods a week, second semester; required in the senior year of the dairy group, Agriculture Course; prerequisite, Dairy 2.

A thorough study of the receiving, sampling and separation of milk and cream, the preparation and use of starters, pasteurization and ripening of cream, principles of churning, washing, salting, working, packing and marketing butter. Attention will also be given to the organization, location, construction, drainage, cooling and ventilation of factories and creameries, the economic disposal of factory by-products and various methods of factory refrigeration.

5. Cheesemaking. Two lectures and one laboratory period a week, second semester; required in the senior year of the dairy group, Agriculture Course.

This course comprises a study of milk as applied to cheesemaking, the manufacture of hard and soft cheese, including the principles involved in the setting, cutting, cooking, dipping, milking, salting, pressing, curing and marketing of cheese.

6. Dairy Farm Management. Two lectures and one laboratory period a week, first semester; required in the senior year of the dairy group, Agriculture Course.

The various methods of improving and upbuilding a dairy herd, and the advanced judging of dairy stock will be emphasized, methods of weighing, testing and recording feed consumed and milk produced by each cow will be outlined. The history and adaptability of various dairy breeds to different conditions and relation of dairy types to milk producing capacity will be studied. This course will also embody study of the extent to which dairy farming is practiced and under which conditions it is best applicable, of dairy farming as an adjunct to general farming and the arrangement and construction of dairy farm buildings, stalls, yards, etc.

7. Dairy Technology. Two lectures a week, first semester; required in the senior year of the dairy group of the Agriculture Course; prerequisite, Chemistry 2 and Dairy 3.

This course treats of the ways in which milk and its products are utilized outside of the scope ordinarily embraced under dairying. It embraces such subjects as value of milk as a food, the preparation of certified, modified, standardized, fermented and condensed milk, the manufacture of casein, milk ivory, milk sugar, renovated butter and oleomargarine.

8. Dairy Research. Elective. A study of various views held by different authorities on certain important dairy subjects, a digest of recent dairy work of the experiment stations, and of comparative dairying as practiced in leading countries. A reading knowledge of German is recommended.

9. Dairy Practice. Elective. The college has a commercial creamery and cheese factory in operation every day during the year except Sunday. Students who specialize in dairying and need practical experience should make it a point to take this course. Arrangements can be made to do this practical work at almost any time during the year. Vacation time is recommended.

10. Domestic Dairying. Elective.

This course includes lectures and laboratory work on such phases of dairying as will be of greatest interest and value to ladies and home life. Such as properties of milk, the various uses of milk, and each of its component parts for the home as well as for commercial purposes, and the relation of germs to quality of dairy products and to consumers of dairy products. The detection of adulteration of milk and dairy products, the use of the Babcock test for fat, effects of different ferments on milk and dairy products, and the making of cheese and butter on the farm will be demonstrated in the College Creamery laboratory. One hour lecture and one hour laboratory a week.

---

## Agronomy Department

PROFESSOR WILLIS, MR. BOPP, MR. BESLEY.

The aim of the Agronomy Department is to give the student some knowledge of the origin and formation of the soil, physical properties of the soil, supply of food to the growing plant, soil moisture, soil temperature, tillage, nutrition, capillary and water holding capacity of various soils, the effect of mulching and tillage upon the conservation of moisture. Also the classifications, improvements, culture, harvesting, uses, history and geographical distribution of crops. Class work and laboratory practice in setting up and testing farm machinery, noting con-



struction and elements necessary for successful work. The arrangement, design, construction, and cost of farm buildings; especially barns, granaries and silos; in fact, to have the student see and feel that agriculture is a science and an art, involving in its scope a knowledge of the natural sciences to the upbuilding of the health, wealth and general good of all people, by the maintenance of the permanency of the fertility of the soil.

With this aim in view the department wishes to offer the following courses:

1. **Farm Crops.** Five lecture and laboratory periods a week, second semester; required in the junior year of the horticulture, the animal husbandry and the agronomy groups, Agriculture Course.

Judging of wheat, barley, oats, emmer, potatoes, corn, etc., classification, improvement, culture, harvesting, uses, history and geographical distribution of crops. Grain grading, cleaning, shrinkage, and care of stored crops to prevent injury and loss.

2. **Farm Crops.** Three recitations a week, second semester; required in the senior year of the agronomy group, Agriculture Course.

Vitality and germination of seeds, preservation of seeds, methods of seeding; conditions of plant growth; peculiarities of the different agricultural plants in respect to structure, habits, and requirements for successful growth; enemies to plant growth,—weeds and weed seeds, their identification and methods of destruction, fungus diseases, such as smut, of oats and wheat, and blight, rust and scab of wheat, oats and barley, scab and rot of potatoes, methods of prevention; insects injurious to farm crops and how to combat them. Class room, laboratory and field work.

3. **Farm Crops.** One recitation a week, first semester; required in the senior year of the agronomy group, Agriculture Course.

A study of the various plants grown for forage in this state, adaptability of each for different sections of the state, comparison of native with the cultivated species. Methods of seeding, harvesting, and treatment of soil while in sod.

4. **Soils.** Five lecture and laboratory periods a week, first semester; required in the junior year of the agronomy group, in the senior year of the horticulture group, Agriculture Course; prerequisite, Physics 3; Chemistry 1 and 2.

The origin and formation of soils, physical properties of the soil, supply of food to the growing plant, soil moisture, soil temperature, tillage, nutrition, irrigation; physical analysis of soils; organic matter, real and apparent, specific gravity; capillary power of different soils; methods of conserving soil water; effect of spring or fall plowing upon soil water; physical effects of different crop rotations.

5. **Soils.** Five lecture and laboratory periods a week, second



semester; required in the junior year of the agronomy group, in the senior year of the horticulture group, Agriculture Course.

The influence of fertility, natural or supplied, upon the field or various crops; the effects of different crops upon the soil and upon succeeding crops; different rotations and the ultimate effect of different systems of farming upon the fertility and productive capacity of soils. Devising rotations fitted for the soils of South Dakota. The above will be supplemented by a laboratory study of manures and fertilizers, their composition and their agricultural and commercial values; of soils cropped continuously with different crops and with a series of crops. A study of the soil of different types or classes.

6. Farm Mechanics. Two recitations a week, second semester; required in the senior year of the agronomy, the animal husbandry and the horticulture groups, Agriculture Course.

Principles of draft, roads, farm motors, horse power, engines, windmills, farm machinery, friction pumps. Laboratory work with models and apparatus for measuring draft, examination and test of farm machinery and implements.

7. Farm Management. Three recitations a week, second semester; required in the senior year of the animal husbandry and the agronomy groups, Agriculture Course.

The selection, laying out and general management of farms, farm buildings, selection and rotation of crops, markets; general summing up and correlation of the work in agronomy. The text-book work will be supplemented with lectures and references.

8. Geology. Five recitations a week, first semester; required in the animal husbandry, the horticulture and the agronomy groups, Agriculture Course, and in the Civil Engineering Course, senior year; elective in the senior year of the General Science Course.

The object of the course in Geology is to give the student a review of the physical condition of the earth; the various dynamic agencies, and the results of their activities; the origin and structure of rocks; and finally the geological history of the globe and the appearance and development of the principal races of animals and plants. The geology of South Dakota is emphasized. The work is based on Scott's Geology. Collection of rocks and minerals, physiographic and geological models and also lantern slides afford ample means for illustration.

9. Dairy Lectures. Second semester. 2 periods.

Soiling and pasturing dairy cows; crops adapted to the dairy farm and best methods of converting these into milk; the place and value of the silo on the dairy farm and the best methods of handling and feeding ensilage.

10. Investigation and Thesis. This course varies in subject matter. The work is under the direction of the head of the department. First and second semester.

## ADVANCED COURSES.

## Elective.

11. Different systems of agricultural practices and the effect of these systems upon the soil.
  12. A detailed study of investigations being carried on in South Dakota.
  13. Mechanical Composition of Soils. Influence upon granulation and other factors of a physical nature which affect crop production.
  14. Seed Selection.
- 

## Department of Horticulture and Forestry

PROFESSOR HANSEN, MR. STOLTENBERG.

In this department the work is given from two standpoints. In one, especially in the study of genetics, emphasis is placed upon the general philosophy of the subject as being essential to a general education. The claim is made that some of the principles of horticulture and forestry are essential to any well rounded education and to the best preparation for citizenship. The second standpoint is that of students intending to make a life work of horticulture or forestry, either as a business or a profession. Throughout the course full use is made of the student's attainments in the various sciences underlying these subjects. The variation of plants and the principles and methods of their development under the hand of man are considered, as well as their propagation and cultivation.

Field and laboratory exercises emphasize the lectures and recitations of the class room. The habit of independent investigation and close observation is encouraged by requiring written reports of outdoor excursions or demonstrations. Excellent facilities for practical illustration are afforded by the ninety acres of experiment station horticultural grounds and college campus. In this domain are included orchards, forestry plantations, nurseries, vegetable gardens, small fruit plantations, flower borders and a collection of ornamental plants. Special attention is paid to the breeding of hardy fruits adapted to prairie conditions and the work of this line is now second to none in extent. The department greenhouse consists of two sections, one for general

floriculture work and the other for fruit-breeding experiments. In addition, the horticultural buildings contain class rooms, laboratory, grafting and potting rooms and storage cellars.

The commercial nursery course is intended as a short winter course for those who desire to engage in the business of growing plants and trees for sale, especially those adapted to prairie conditions.

Special stress is laid upon practical work in the grafting room. No examination is required for entrance to this short course.

The following work is offered:

1. Pomology. Two lectures a week, first semester; required in the junior year of the horticulture group, Agriculture Course.

Principles of fruit culture with special reference to prairie conditions; exercises in the identification and description of fruits with methods of cultivation and propagation. Texts: American Horticultural Manual, Bailey's Principles of Fruit Culture.

2. Genetics. Two recitations a week, second semester; required in the sophomore year of the Agriculture Course, elective in the junior year of the General Science Course.

This subject is especially recommended to students of the sciences relating to plants and animals, and also to students of general history and sociology. The evolution of plants and animals under the hand of man and in the state of nature; the philosophy of artificial evolution or the modification and amelioration of plants and animals by environment, selection and hybridization; the relation of genetics to sociology; recent theories and work in plant-breeding.

Texts: Darwin's Animals and Plants under Domestication; De Vries' Species and Varieties, their Origin by Mutation; Bailey's Plant-Breeding and Survival of the Unlike; Reports of International Conferences on Genetics; Reports of the U. S. Department of Agriculture.

3. Floriculture and Market Gardening. Two recitations a week, second semester; required in the junior year of the horticulture group, Agriculture Course.

The commercial and amateur cultivation of flowers and vegetables under glass and in the open air; lectures, demonstrations, and textbook work.

4. Forestry. Three recitations a week, second semester; required in the senior year of the animal husbandry group, Agriculture Course.

Principles of forestry, the influence of forests on the climate; timber planting on the prairies; European forestry methods as modified by prairie conditions; shelter belts; the propagation, culti-



vation, characteristics and use of forest trees; lectures and demonstrations.

Texts: Pinchot's Primer of Forestry; Green's Forestry in Minnesota; Proceeding of the American Forest Congress.

5. Landscape Gardening. One recitation and one laboratory period a week, second semester; required in the senior year of the horticulture group, Agriculture Course.

The philosophy of the Beautiful in its various modes of expression; gardening as one of the fine arts; historic development of the ancient or geometric and the modern or natural styles; the best ornamental trees, shrubs, plants and hedges. Special attention is paid to the development of originality in the planning and laying out of country and city home grounds, parks and school grounds; lectures; text-books, and references.

6. Floriculture and Home Gardening. Instruction in home gardening for the students in the short winter course in domestic economy and agriculture; text-books; practical demonstrations and exercises.

7. Nursery Handicraft. Practical exercises in tree, shrub and plant propagation for students in the short commercial nursery course.

---

## Department of Veterinary Medicine

DR. MOORE.

This department occupies a separate two-story building with a hospital in connection. The operating room is equipped with all necessary supplies and instruments for ordinary surgical operations. Free clinics are held each Saturday at which students assist and perform operations under the direction of the instructor. The instruction offered is aimed to meet the requirements of the agricultural student as well as the special student in veterinary medicine. By a judicious selection of courses in this and other departments the equivalent of the first year's work of the veterinary colleges may be secured.

The following work is offered:

1-2 Veterinary Anatomy. Five recitation and laboratory periods a week, first and second semesters; required in the junior year of the veterinary group, Agriculture Course. Conducted by the laboratory method with frequent quizzes. Osteology and arthrology.

3-4 Veterinary Anatomy. Five recitation and laboratory periods a week, first and second semesters; required in the senior year of



the veterinary group, Agriculture Course. Splanchnology and myology. A continuation of the preceding. Text: Chauveau's Comparative Anatomy of the Domesticated Animals.

5. Horseshoeing and Lameness. Two recitations a week, second semester; required in the junior year of the animal husbandry and the veterinary groups, Agriculture Course. The anatomy of the foot, its care, preparation, and shoeing; diseases of the organs of locomotion.

6. Veterinary Medicine. Five recitation and laboratory periods a week, first semester; required in the senior year of the animal husbandry, the dairy and the veterinary groups, Agriculture Course. The work will consist of lectures and clinics.

7. Veterinary Medicine. Five recitation and laboratory periods a week, second semester; required in the senior year of the animal husbandry and the veterinary groups, Agriculture Course.

8. Bacteriology. Five recitation and laboratory periods a week first semester; required in the Home Economics Course, and the dairy group, Agriculture Course, junior year; also in the senior year of the Pharmacy Course; elective in the senior year of the General Science Course. This subject is designed especially to acquaint the student with laboratory methods and technique.

Veterinary Physiology. See Department of Zoology, Zoology 2 and 3.

---

## Department of Home Economics and Domestic Art

MISS WILCOX, MISS FROMME.

The work of this department is developed along two lines, home economics and domestic art.

Home economics includes the courses which have to do especially with scientific study of the activities of the home.

Domestic art includes the practical courses in cooking and serving.

This department stands for a better appreciation and a wider knowledge of the things that make for better homes. While the work is essentially scientific in character, the courses have been planned with due regard to cultural needs. The department is very favorably located, occupying the entire floor, and is well equipped for the various lines of work. Charts and exhibits illustrating the chemical compositions of food are found in the

class room; general reference books and magazines are found in the general library.

1. Food and Dietetics. Four recitations and one laboratory period a week, first semester; required in the Home Economics Course, elective in the General Science Course, freshman year; prerequisite, a freshman, or higher, classification. The nature, nutritive constituents and relative value of foods. Typical processes of food production. Cost of food. Diaries.

2. Textiles. Two recitations a week, second semester; elective in the freshman year of the General Science Course; prerequisite, a freshman, or higher, classification. Study of fabrics; fibres used in making fabrics, their preparation and manufacture; primitive industries, spinning and weaving; use of fabrics in clothing and in the house.

3. Application of heat to food. Three recitations and two laboratory periods a week, second semester; required in the junior year of the Home Economics Course, elective to young ladies in the junior year of the General Science Course in place of Physics 4; prerequisite, Botany 2, Chemistry 3, Zoology 3, and Home Economics 1. Food principles; effect of heat; household fuels and their uses; cooking apparatus and the principles of construction; cooking and serving of typical foods.

4. Household Sanitation and General Hygiene. Three recitations a week, first semester; required in the senior year of the Home Economics Course; elective, together with Home Economics 7 to young ladies in the junior year of the General Science Course in place of Physics 3; prerequisite, Chemistry 2, Botany 2 and Zoology 2. By reference and lectures the following subjects are considered: Situation of a house with regard to soil drainage and general surroundings, plumbing and heating arrangements, water supply, sanitary and unsanitary conditions in house, problems of personal and public hygiene, necessary precautions against spread of disease.

5. Home Nursing and Invalid Cookery. Three recitations a week first semester; required in the senior year of the Home Economics Course; prerequisite, Home Economics 1. This course includes a study of diet for the sick, care of the sick in the home and the preparation of food for them. A few lectures are usually given by a physician.

6. Household Economy. Three recitations a week, second semester; elective in the freshman year of the General Science Course. The aim of this course is to set forth some of the principles underlying housekeeping, including the organization and management of the household.

7. The House. Two recitations a week, first semester; required in the senior year of the Home Economics Course, elective together with Home Economics 4, in place of Physics 3 to young ladies in the junior year of the General Science Course; prerequisite, the work

below the junior year. Study of the development of the modern house from primitive conditions; modern household problems of furnishing and equipment.

8. Teaching of Home Economics. Two recitations a week, second semester; elective in the senior year of the Home Economics Course; prerequisite, Philosophy 1 and 3. Purpose and methods of work; a consideration of courses of study, school equipment; the relation of the subject to other studies and the school as a whole.

9. Original Investigation. Two laboratory periods a week, second semester; required in the senior year of the Home Economics Course; prerequisite, Botany 2, Chemistry 4, Zoology 3, Bacteriology, and Home Economics 1 and 6. Laboratory Work. Individual problems assigned for investigation.

#### DOMESTIC ART.

For description of Domestic Art 1 and 2, see the preparatory department.

3. Sewing. Three laboratory periods a week, second semester; required in the freshman year of the Home Economics Course. Plain dressmaking, drafting, cutting, fitting and general dressmaking. Each student is required to make a shirt-waist suit. Students who have had this work or its equivalent may take a course in art needlework instead. The course will be fitted, as much as possible, to the needs of the individual student.

---

## Department of Mechanical Engineering

PROFESSOR SOLBERG, MR. COOK.

The object of the work offered is to give the students a thorough training in the theoretical principles underlying the science of mechanics and machines and at the same time to enable them to become practically familiar with some of the numerous applications of these principles which are of such inestimable value to the human race.

The instruction is both theoretical and practical. The usual methods of text-book study and lectures are employed, but the student is required to put into practice, as far as possible, the instruction he receives. Hence the work of the class-room is supplemented and practically exemplified by practice in shops. The student not only studies the theories of constructing and operating machinery, but in the drawing room he designs, and in the shop constructs and operates such machines. It is believed



that those who complete this course will be able to fill responsible positions in manufacturing establishments. It is important that French be elected as the language that is required in addition to English.

The department is located in the Engineering Building. The workshops are supplied with a large variety and quantity of tools. The woodshop is furnished with twenty-five sets of carpenter tools and with eight wood turning and one pattern maker's lathe, a scroll saw, a combination circular saw and a twenty-inch planer. There is also a variety of special tools for wood working.

The machine shop is furnished with a large number of engine lathes of different sizes, a universal milling machine, shaper, planer, tool grinder, drill press, emery wheels and a great variety of hand tools. The machinery is driven by a 50 H. P. Atlas Engine.

The experimental laboratory, is equipped with a 100,000-pound Riehle vertical screw testing machine, a 2,000-pound cement testing machine, together with steam, gas and hot-air engines. These machines are furnished with a large variety of smaller instruments for making complete tests, such as indicators, planimeters, tachometers, extensometers, compressometers, deflectometers, etc., also all the necessary equipment for testing cements and concretes.

Work in architectural drawing and designing is offered. Additional work along this line will be given to students who desire it.

A large number of pictures, drawings, and illustrative material has been recently added to the equipment through the liberality of manufacturers and friends of the college.

The following work is offered:

For description of Mechanical Engineering 1 and 2, see the preparatory department.

3. Machine Shop. Three laboratory periods a week, second semester; required in the freshman year of the Mechanical and the Electrical Engineering Courses. Manipulation of the various machines in turning, planing, shaping, milling, gear cutting and tool making.

4. Machine Shop. Five laboratory periods a week, first semester; required in the sophomore year of the Mechanical and the Electrical Engineering Courses. Construction of some machine or appliance from designs made in drawing room.



5. Mechanical Drawing. Five laboratory periods a week, first semester; required in the freshman year of the Engineering Courses; elective in the junior year of the General Science Course. Instrumental drawing, geometrical problems and parts of machines. This work is offered during the entire year, and at hours convenient to teachers and students.

6. Architectural Drawing. Three times a week, first or second semester; elective in the junior year of the General Science Course. Rendered drawings of simple buildings, examples of various orders, giving facility in draughtmanship, familiarizing students with principles.

6a. Architectural Design. Three times a week, first semester; elective in the senior year of the General Science Course. Principles of planning introduced in practical problems, exercises in composition and details.

6b. Perspective. Five times a week, first or second semester; elective in the senior year of the General Science Course.

7. Descriptive Geometry. One recitation and two laboratory periods a week, second semester; required in the sophomore year of the three Engineering Courses. Instruction in methods of representing by drawing all geometrical magnitudes and solution of problems relating to these magnitudes in space.

8. Machine Design. Two laboratory periods a week, second semester; required in the sophomore year of the Mechanical and the Electrical Engineering Courses. Solution of various problems involving the design of simple parts of the machine. Text: Klein's Machine Designs.

9. Machine Design. Four laboratory periods a week, first semester; required in the junior year of the Engineering Courses. Continuation of Mechanical Engineering 8.

10. Elements of Mechanism. Three recitations a week, first semester; required in the junior year of the Engineering Courses. Elements of machinery, velocity ratios, graphic representation of speed and acceleration; motion transmitting parts, such as gears, belts, cams, screws, link work; automatic feeds, parallel and quick return motions; designing. Text: Wood and Stahl.

11. Gas and Oil Engines. Two recitations a week, second semester; required in the junior year of the Mechanical Engineering Course, in the senior year of the Electrical Engineering Course. Study of the theory, design and operation of the different types and cycles of gas and oil engines. Text: Hutton's Gas Engines.

12. Steam Engines and Thermodynamics. Five recitations a week, second semester; required in the junior year of the Mechanical and the Electrical Engineering Courses, and for the fifth year degree

in Civil Engineering. Study of the modern steam engine, slide valve, and when in combination with independent cut-off valves, link motion and Zeuner diagrams, reciprocating parts and indicator practice; the principles of the theory of heat which are necessary to a study of the various kinds of heat engines; the application of laws of thermodynamics to the steam engine and a study of steam engine economy by entropy temperature analysis and by other graphical methods. Text: Ripper's Steam Engine.

13. Steam Boilers. Two recitations a week, first semester; required in the senior year of the Mechanical and the Electrical Engineering Courses. Advantages and disadvantages of using the various forms of boilers, methods of construction, tubes and flues, plates, riveting, bracing, grate and heating surface, guages and feed appliances, setting, care and operation. Text: Peabody's Steam Boilers.

14. Kinematics. Two laboratory periods a week, second semester; required for the fifth year degree in the Mechanical and the Civil Engineering Courses. Geometry of machinery, problems in the design of motion transmitting appliances.

15. Strains in Framed Structures. Three recitations a week, second semester; required in the senior year of the Mechanical and the Civil Engineering Courses. Graphical determination of stresses under action of static, moving and wind forces. Text: Green, Vol. 1.

16. Mechanics of Materials. Three recitations a week, second semester; required in the junior year of the Engineering Courses. Study of the strength and elastic properties of materials of construction, and the elementary stresses of deformation in tension, compression, shearing, torsion and flexure and mechanics of beams, columns and shafts. Text: Merriman's Mechanics of Materials.

17. Experimental Engineering. Two laboratory periods a week, first semester; required in the senior year of the Engineering Courses. Here each student is required to carry out a definite series of tests of the various materials of construction, such as timber, cast iron, wrought iron, steel, cements and concretes. He is also required to make complete tests of efficiencies of gas engines, hot air engines, steam engines and boilers, etc.

18. Experimental Engineering. Two laboratory periods a week, second semester; required in the senior year of the Engineering Courses. Continuation of Mechanical Engineering 17.

19. Engineering Design. Five laboratory periods a week, first semester; required in the senior year of the Mechanical Engineering Course. Solution in the drawing room of some practical problems in design and making working drawings of same.

20. Engineering Design. Three laboratory periods a week, second semester; required in the senior year of the Mechanical Engineering Course. Continuation of Mechanical Engineering 19.

21. Structural Design. Three laboratory periods a week, first semester; required for the fifth year degree in Mechanical Engineering. Designing of roofs and buildings for power stations. For students in mechanical and electrical engineering.

22. Structural Engineering. Two laboratory periods a week, second semester; required for the fifth year degree in Mechanical Engineering. Continuation of Mechanical Engineering 21, with special reference to results obtained from Mechanical Engineering 18.

23. Power Transmission and Measurement. Two recitations a week, first semester; required in the senior year of the Mechanical Engineering Course; also for the fifth year degree in Electrical Engineering. This work includes a study of the methods employed for transmission and measurement of power in machine shops and factories, and a review of experiments which have been made to determine the efficiency of the various systems of power transmission. Attention is also given to the design of transmission machinery, and to the design and arrangement of the equipment in power plants.

24. Statics. Two recitations a week, first semester; required for the fifth year degree in Mechanical Engineering. Treated with special reference to the requirements of engineers. Resolution and composition of forces; center of gravity; principles of equilibrium with numerous applications. Graphic as well as algebraic methods are used. The various hurtful resistances to friction are considered, and numerous problems worked out in the drawing room.

25. Heating and Ventilation. Two recitations a week, second semester; required for the fifth year degree in Mechanical Engineering. A study of the principles underlying the design of the various systems of heating and ventilation in common use, including such details as loss of heat from buildings, problems in proportioning ventilating ducts; and the arrangement of systems of piping for steam and hot water. A study is also made of the various mechanical details entering into the installation of private plants and also plants operated from central stations.

26-27. Thesis Work. Two and three hours a week, first and second semesters; required for the fifth year degree in Mechanical Engineering. At the beginning of the fifth year's work a subject is assigned to each student, which he is to investigate, and on which he is required to prepare a thesis. This work may involve original design, or it may involve an experimental investigation of the action of certain machines or appliances or of the phenomena developed by the action of certain mechanical forces. In the pursuit of this work the student is thrown largely on his own responsibility. He is expected to familiarize himself with the literature on the subject and to study thoroughly the methods involved in the subject selected. The subject chosen should be submitted to the professor in charge not later than November first of the current year.



## Department of Electrical Engineering

PROFESSOR MATHEWS, MR. HOY.

The aim of the work offered in electrical engineering is to impart to the student a practical knowledge of the principles of this branch of engineering. Recognized as it is as one of the most important engineering subjects, a well equipped laboratory is provided for the use of the student to supplement the lecture and recitation work of the class room. The laboratory equipment consists of generators and motors of both the direct and alternating types, transformers, and measuring instruments of different types and classes for the recording and measuring of current and pressure, a sixty-cell storage battery used in connection with the work in photometry, various types of lamps, arc and incandescent, lamp banks, rheostats, and other apparatus used in connection with testing.

The following work is offered:

1. Electricity and Magnetism. Three recitations and one laboratory period a week, first semester; required in the junior year of the Courses in Electrical and Mechanical Engineering, and in the senior year of the Course in Civil Engineering; prerequisite, Mathematics 7, 8 and 9, Physics 4. This subject embraces a study of the theory and principles of static and current electricity, magnetism and the magnetic circuit, electro-magnetic induction and laws of the electric circuit, primary batteries, principles of telegraphy and the telephone.

2. Telephone Engineering. Two recitations a week, first semester; required in the junior year of the Electrical Engineering Course; prerequisite, Mathematics 7, 8 and 9, Physics 4, Electrical Engineering 1. A study of the theory and principle of the telephone, study of parts and construction of different types, switchboards, and auxiliary apparatus, lines and line construction.

3. Dynamo Electric Machinery. Three recitations and two laboratory periods a week, second semester; required in the junior year of the Courses in Mechanical and Electrical Engineering, and for the fifth year degree in Civil Engineering; prerequisite, Mathematics 11, Physics 4, and Electrical Engineering 1. Theory of the magnetic circuit, magnetic induction in iron, principles underlying the design, construction and operation of direct current generators and motors. Resistance and insulation tests, experimental study of the operation and behavior of different types of motors and generators, efficiency tests.

4. Alternating Currents. Three recitations and two laboratory periods a week, first semester; required in the senior year of the



Electrical Engineering Course, also for the fifth year degree in Mechanical Engineering; prerequisite, Mathematics 11, Physics 4, and Electrical Engineering 1 and 3. Study of the flow of alternating currents, inductance, capacity, principles of construction of alternating current generators and motors, transformers; measurement of inductance and capacity, wave form of pressure and current, efficiency tests of machines and transformers.

5. Dynamo Design. Three laboratory periods a week, first semester; required in the senior year of the Course in Electrical Engineering; prerequisite, Mathematics 11, Physics 4 and Electrical Engineering 1 and 3. In this the student works out and completes a full set of drawings of a shunt or compound wound type of direct current generator of small size. The object of this course is to teach the theory of design of machines and to familiarize the student with the details and parts of the machine in relation to each other and to the machine as a whole.

6. Electric Light and Power Distribution. Three recitations and two laboratory periods a week, second semester; required in the senior year of the Electrical Engineering Course; prerequisite, Mathematics 11, Physics 4 and Electrical Engineering 4. A study of transmission lines, resistance and inductance effects in line circuits, kinds of apparatus used in the generating station and in the receiving station, arc and incandescent lamps, special forms of lamps, indicating and recording instruments, laboratory work along the lines of lamp testing and the calibration of instruments.

7. Polyphase Currents. Three recitations and two laboratory periods a week, first semester; required for the fifth year degree in Electrical Engineering; prerequisite, all the work required for the Bachelor's degree in this department. A study of polyphase currents, machines, transmission systems and measuring apparatus; experimental work in connection with polyphase currents.

8. Electrical Design. Three laboratory periods a week, first semester; required for the fifth year degree in Electrical Engineering; prerequisite, all the work required for the Bachelor's degree in this department. A study of the design of lifting magnets, clutches and transformers, and of the principles involved in the construction of the apparatus mentioned above.

9. Design of Power Stations. Three recitations and two laboratory periods a week, second semester; required for the fifth year degree in Electrical Engineering; prerequisite, Electrical Engineering 7 and 8. A study of the different types of stations, arrangement of boilers, engines, machines, switchboards and electrical apparatus, location of station with respect to distributing system. A station design is worked out by the student and drawings of plans made.

10. Installation and Testing of Power Plants. Two recitation and one laboratory period a week, second semester; required for the

fifth year degree in Electrical Engineering; prerequisite, Electrical Engineering 7 and 8. A study of foundation construction and setting of machines, number and division of relative to the capacity of the plant, building of switchboards, efficiency and operation tests of plants, etc.

11-12 Thesis. Two or three hours a week, first and second semesters. A complete investigation of some electrical subject or apparatus or the design of a machine or other electrical appliance, containing when possible the results of personal and independent observation. The subject must be selected early in the year (not later than November first,) and reports submitted from time to time concerning the progress of the work to the professor in charge.

---

## Department of Civil Engineering

PROFESSOR DERR.

The course in civil engineering is designed to impart to students general and technical knowledge, so that, equipped with their theoretical education and as much of engineering practice as can well be acquired in college, they may develop into successful practitioners.

It is aimed to give as thorough a preparation as time will permit in the following subjects: the surveying of land, location and construction of roads, railroads, canals and water works; the construction of foundations in water and on land, and of superstructures and tunnels; the application of mechanics, graphical statics, and descriptive geometry to the construction of various kinds of arches, trusses, roofs, and bridges; the sewerage of towns, and the irrigation and reclaiming of land; the preparation of detail drawings, and plans and specifications; the laws of construction as related to contracts, bids and bidders; political economy for the purpose of making clear the economic value of the civil engineer as a director of industrial enterprises.

1. Surveying. Five periods of recitations and field work a week, second semester; required in the freshman year of the Civil Engineering Course; prerequisite, Mathematics 9. General principles and fundamental operations; instruments; the declination of the magnetic needle; laying out, parting off and dividing up land; United States land surveys. Text: Tracy's Plane Surveying.

2. **Surveying.** Two periods of recitation and field work a week, second semester; required in the Courses in Agriculture, Mechanical Engineering and Electrical Engineering, elective in the General Science Course, freshman year. An abridged course for other students in engineering and agriculture, along the lines of Civil Engineering 1.

3. **Surveying.** Five periods of recitation and field work a week, first semester; required in the sophomore year of the Civil Engineering Course. A continuation of Civil Engineering 1. Leveling, higher surveying; adjustments of instruments; topographic and exploratory surveying; plans and tachymetric surveying.

4. **Topographical Surveying.** Two periods of recitations and field work a week, second semester; required in the sophomore year of the Civil Engineering Course; prerequisite, Civil Engineering 1. Triangulation, precise leveling. Transit stadia lines, connecting with triangulation stations, form the basis for the topography, and plane-table practice is given in filling in the details. Maps are plotted to scale from the co-ordinates of the stadia lines, adjusted to the triangulation, and contours are drawn. Recitations, field work, computations and drawings. Text: Wilson's Topographical Surveying.

5. **Hydraulics.** Three recitations a week, first semester; required in the junior year of the Civil Engineering Course, in the senior year of the Courses in Mechanical and Electrical Engineering; prerequisite, Mathematics 11. Hydrostatics and theoretical hydraulics; study of flow through orifices, tubes, pipes, over weirs, in conduits, canals and rivers; application in engineering, water power plants and developments. Text: Merriman's Hydraulics.

6. **Geodesy.** Three periods of recitation and field work a week, second semester; required in the junior year of the Civil Engineering Course; prerequisite, Mathematics 11 and Civil Engineering 1. Construction and use of instruments with reference to the elimination of instrumental errors; precise leveling; methods of sounding; development of the method of least squares, with application to survey problems and to the adjustment of a triangulation. Text: Crandall's Goedsey and Least Squares.

7. **Water Supply.** Two recitations a week, second semester; required in the junior year of the Civil Engineering Course, prerequisite, Civil Engineering 5. The design, construction, operation and management of municipal water supply systems. Text: Turneure and Russell's Public Water Supplies.

8. **Irrigation.** Two recitations a week, second semester; required in the junior year of the Civil Engineering Course; prerequisite, Civil Engineering 5. The principles underlying the design and construction of irrigation works; hydrography, canals, storage reservoirs. Text: Wilson's Irrigation Engineering.

9. **Masonry and Foundations.** Two recitations a week, second semester; required in the junior year of the Civil Engineering Course



in the senior year of the Courses in Mechanical and Electrical Engineering; prerequisite, Mathematics 11 and 13. Building stone, retaining and reservoir walls and dams, arches; mechanics of masonry construction; foundations on land and water; coffer dams, caisson and crib dams; pneumatic caissons. Text: Baker's Masonry and Foundations.

10. Sewerage. Two recitations a week first semester; required in the senior year of the Civil Engineering Course. A study of the design, construction and operation of sewer systems, and of the various methods of sewage disposal; water purification. Text: Follwell's Sewerage.

11. Roads and Pavements. Two recitations a week, first semester; required in the senior year of the Civil Engineering Course. Construction and maintenance of city streets and country roads; study of pavements and paving materials. Text: Baker's Roads and Pavements.

12. Contracts and Specifications. Two recitations a week, first semester; required in the senior year of the Engineering Courses. Synopsis of the law of contracts as applied to engineering construction; study of typical contracts and specifications; riparian rights, boundary lines, survey descriptions, etc. Text: Johnson's Engineering Contracts and Specifications.

13. Railroad Engineering. One recitation and two periods of field work a week, second semester; required in the senior year of the Civil Engineering Course, and for the fifth year degree in Mechanical and Electrical Engineering; prerequisite, Civil Engineering 1. The field work includes the laying out of curves and the staking out of structures, in addition to making the reconnaissance, preliminary and location surveys for a short line of railway; recitations, lectures, field work and drawing. Text: Raymond's Elements of Railroad Engineering.

14. Dam and Reservoir Design. Two laboratory periods a week, second semester; required in the senior year of the Civil Engineering Course; prerequisite, Civil Engineering 5, and Mathematics 11 and 13. The study of modern hydraulic construction; dams, reservoirs, conduits, levees, etc. Structures relating to water power, canals and irrigation.

15. Structural Design. Five periods of recitation and laboratory work a week first semester; required for the fifth year degree in Civil Engineering; prerequisite, Mathematics 11, Mechanical Engineering 6. Computation of stresses in roof and bridge trusses; highway and railway bridge trusses; graphic analysis of simple beams and roof and bridge trusses; center of gravity and moment of inertia. Text: Merriman and Jacoby's Roofs and Bridges, Part I and II.

16. Structural Design. Three laboratory periods a week, second semester; required for the fifth year degree in Civil Engineering;



**prerequisite, Civil Engineering 15. Principles of economic design; design of plate girder bridge, pin bridge, riveted bridge; continuous bridges, draw bridges, cantilever bridges, suspension bridges, arches; building construction. Text: Merriman and Jacoby's Roofs and Bridges, Part III.**

**17. Hydraulic Motors. Three recitations a week, first semester; required for the fifth year degree in Civil Engineering; prerequisite, Civil Engineering 5. A study of reaction turbines and impulse wheels; construction, regulation, testing sources of loss of energy. Text: Church's Hydraulic Motors.**

**18. Reinforced Concrete. Three recitations a week; first semester; required for the fifth year degree in Civil Engineering, prerequisite, Mathematics 13, Mechanical Engineering 16. A study of reinforced concrete construction, including investigation of stresses and the determination of form and proportions; recitations, computations, and drawing.**

**19-20. Thesis. Two and three hours a week, first and second semester; required for the fifth year degree in Civil Engineering. The thesis is intended to show the student's ability to apply the fundamental principles acquired in this course, in original investigation or design of some engineering structure, the student working independently and making regular reports showing the progress of the investigation or design to the professor having charge of the subject. The subject and the plan of the work should be submitted to the professor in charge not later than November first of the current year.**

---

## Department of English

PROFESSOR BATES, ASSOCIATE-PROFESSOR POWERS.

The aim of the department is two-fold; to train the student in the effective use of the English language in original composition, and give him an intelligent appreciation of English literature.

The following courses are offered:

For a description of English 1 to 6, see the preparatory department.

**7. Rhetoric. Four recitations a week, first semester; required in the freshman year of all the courses; prerequisite, English 6. This work is devoted to a practical study of the principles of rhetoric, and to constant practice in composition. This receives individual criticism by the instructor and is freely discussed in class for the**

purpose of making clear the rhetorical principles. The work is supplemented by reading.

8. Rhetoric. Four recitations a week, second semester; required of the same classes as English 7, of which it is a continuation; prerequisite, English 7.

9. Chaucer and a Brief History of the English Language. Four recitations a week, first semester; required in the sophomore year of the Courses in Home Economics, General Science and Pharmacy; prerequisite, English 8.

10. Elizabethan Drama. Four recitations a week, second semester; required of the same classes as English 9; prerequisite, English 9.

11-12. Advanced Rhetoric. Two recitations a week, first and second semesters; required in the junior year of all courses except the Pharmacy Course; prerequisite, English 8. This course consists in writing and in a rhetorical analysis of masterpieces of English prose, in the fields of both science and literature.

13. English Literature from 1625 to 1800. Three recitations a week, first semester; elective in the junior year of the General Science Course, and in the senior year of the Home Economics Course; prerequisite, English 8. An historical survey in connection with the reading of classics of this period.

14. English Poetry of the Nineteenth Century. Three recitations a week, second semester; elective in the same classes as English 13; prerequisite, English 8. The first part of this course is devoted chiefly to the great poets of the romantic movement. Later, Browning, Tennyson, and the Pre-Raphaelites are taken up. The poems to be studied are selected from Page's British Poets of the Nineteenth Century.

15. English Prose of the Nineteenth Century. Five recitations a week, first semester; elective in the senior year of the General Science Course; prerequisite, English 12. A study of prose writings representative of the thought and life of this period. The works studied are from Macaulay, Carlyle, Ruskin, and Mathew Arnold.

16. English Prose of the Nineteenth Century. Five recitations a week, second semester; elective in the senior year of the General Science Course; prerequisite, English 15. A continuation of English 15. The works studied are chiefly fiction.

---

## Department of Latin

PROFESSOR RODEHEAVER, MR. SAUNDERSON.

The work offered in Latin aims to give the student sufficient knowledge of the language to enable him to pursue the

work in science with success. A knowledge of Latin is also a very valuable aid in the mastery and clear understanding of the English language.

In the first and second years of the preparatory department a choice is given between beginning Latin and elementary science work; and in the freshman and sophomore years of the courses in General Science, HomeEconomics and Pharmacy the student has an option between Latin and modern languages.

The following work is offered:

For description of Latin 1, 2, 3 and 4, see the preparatory department.

5. Latin. Four recitations a week, first semester; elective in the freshman year according to the above requirements. Cicero, Oration against Cataline, III and IV; Poet Archias.

6. Latin. Four recitations a week, second semester; Latin 5 continued. Virgil, Books I and II, with special attention to scansion, rhetorical figures, and mythological references.

7. Latin. Four recitations a week, first semester; elective in the sophomore year according to the above requirements. Virgil, Books III, IV and V.

8. Latin. Four recitations a week, second semester; Latin 7 continued. Virgil, Book VI; Livy.

---

## **Department of Modern Languages**

PROFESSOR HAYES.

Students who pursue work along scientific, technical or historical lines are virtually compelled to have at least a good reading knowledge of either French or German, while it is becoming generally recognized that they should have both.

In the General Science, the Home Economics and the Pharmacy Courses either French, German or Latin, and in the Agriculture Course, either French or German is required during the freshman and the sophomore years. In the Engineering Courses French is required during the sophomore year. Higher work is elective and the student is strongly advised to take a third year, if possible, of the language chosen.

### **GERMAN.**

1. German. Four recitations a week, first semester; elective in the freshman year according to the above requirements. German



grammar, prose and composition; constant drill in pronunciation, occasional memorizing of selected passages, and practice in speaking German. Reading is begun early. Text: Bacon's Grammar.

2. German. Four recitations a week, second semester. Continuation of German 1.

3. German. Four recitations a week, first semester; elective in the sophomore year according to the above requirements. Historical and other prose and poetry of the last century; composition and conversation. Text: Joynes-Meissner's Grammar.

4. German. Four recitations a week, second semester. Continuation of German 3. In addition there will be extensive reading of scientific German. Text: Wait's German Science Reader.

5. German. Three recitations a week, first semester; elective in the junior year of the General Science Course, and in the senior year of the Home Economics Course. Lessing and Schiller, with a review of German literature up to their time. Nathan der Weise and Emilia Galotti, Die Jungfrau von Orleans and Wilhelm Tell. Themes and collateral reading.

6. German. Three recitations a week, second semester; elective in the same classes as German 5, of which it is a continuation. Goethe's life and works; Goethe and Schiller; Goethe and Carlyle; influence upon German and English literature. Faust, selected portions from both parts; Dichtung und Wahrheit or Goetz von Berlichingen. Themes and collateral reading.

#### FRENCH.

1. French. Four recitations a week, first semester; elective in the freshman year according to the above requirements. French grammar, prose, and composition. Thorough drill in pronunciation; reading and practice in speaking begun very early. Texts: Fraser and Squair's Grammar; *Le Tour de la France par deux Enfants*.

2. Four recitations a week, second semester. Continuation of French 1. Dictation exercises, memorizing of selected passages, conversation. Text: Super's Reader.

3. French. Four recitations a week, first semester; elective in the sophomore year according to the above requirements. Hugo, Balzac, De Musset, and other nineteenth century writers; collateral reading and conversation.

4. French. Four recitations a week, second semester. Continuation of French 3. In addition there will be extensive reading of scientific French, with Luquiens' Popular Science for text-book.

5. French. Three recitations a week, first semester; elective in the junior year of the General Science Course, and in the senior year of the Home Economics Course. Corneille, Racine, La Fontaine; their lives and works; their influence on their contemporaries; the literature and society of their time. Themes and collateral reading.



6. French. Three recitations a week, second semester; open to those who have completed French 5. Moliere and Voltaire; their lives and writings; their influence on French and English thought; how they were influenced by English writers, particularly Shakespeare. Themes and collateral reading.

---

## Department of History and Political Science

PROFESSOR HARDING.

The aim of this department is to introduce the student to such studies as may enable him to deal with economic problems and to fulfill his social and political duties; to develop in him the power to use critically and constructively the historical method, and especially to awaken in him an interest in the great field of history and political science and an enthusiasm for personal individual effort. Constant endeavor is made to teach the practical application of the social, political and economic experiences of the race to the problems of modern life.

The text-book is supplemented by lectures and class discussions based upon assigned readings or the original work of students. Students are encouraged in every way to make use of the college library, which is the tool house of this department.

For description of History 1 to 6, see the preparatory department.

7. Medieval History. Three hours a week, first semester; required in all the courses leading to the degree of Bachelor of Science, except the Engineering Courses; in the junior year except in the dairy group, where it is offered in the senior year. A general survey of the history of Europe from the barbarian invasions to the close of the fifteenth century. Lectures, text-book, papers, reports and practices in application of the fundamental principles used in testing the value of historical material. Text: Robinson's History of Western Europe.

8. Modern History. Three recitations a week, second semester; required of the same classes as History 7, of which it is a continuation. Continuation of History 7. History of Europe from the opening of the sixteenth century to the present time.

9. American History. Three recitations a week, first semester; elective in the junior year of the General Science Course, and in the senior year of the Home Economics Course. A study of constitutional and political development from 1750 to 1829. Lectures, library work, reports, and careful study of assigned sources.

10. American History. Three recitations a week, second semester; elective in the same classes as History 9, of which it is a

continuation. The constitutional and political history of the United States from the beginning of Jackson's administration to the Civil War.

11. **Political Economy.** Three recitations a week, first semester; required in the senior year of all the four year courses except the Pharmacy Course. A study of the fundamental laws of economic science. Text-book supplemented by lectures on special subjects and assigned readings. Text: Seager's Introduction to Economics.

12. **Sociology.** Three recitations a week, second semester; required in the senior year of the Courses in Agriculture, Home Economics and General Science. The fundamental principles of social science. Text-book, supplemented by lectures and special reports.

13. **American Government.** Three recitations a week, first semester; elective in the senior year of the General Science Course. An advanced study of the actual workings of government in the United States, federal, state and local, including suffrage and elections, party machinery and methods, national civil service, extra legal methods of political action, and comparisons with other governments. Lectures, text-book, and the preparation of reports upon assigned subjects. Open to juniors and seniors and to other qualified students upon the consent of the instructor. Texts: Hart's Actual Government, supplemented by Bryce's American Commonwealth.

14. **American Government.** Three recitations a week, second semester; elective in the senior year of the General Science Course. Complement of 13. The following topics will be considered: the territorial functions of government, including land and land holding, boundaries and annexations, territories and colonies; the financial functions, external relations, organization of commerce, transportation, education, religion and public morals, and public order.

---

## Department of Philosophy

PROFESSOR RODEHEAVER.

The aim of this department is to give a general knowledge of the facts and laws of experience, with special emphasis upon the intimate relations of mind and body and the practical significance of these facts and laws in every day life. The course in Ethics considers the prevailing theories of conduct, but chief attention is given to encouraging a wholesome view of the leading problems of life which make for the fullest, most beautiful and most efficient living.

The study of education may yield large values to every citizen. The graduates of the college who have taken the work here offered and have had a year's experience in teaching, are entitled to a provisional state certificate, and after two years of successful experience in teaching will be entitled to a state certificate.

1. **Psychology.** Three recitations a week, first semester; required in the junior year of the Courses in Agriculture, Home Economics and General Science. The structure and function of the nervous system. Discussion of the different phases of mental activity, especially their origin and function. Class room discussions based upon Angell's Psychology, supplemented by assigned readings, lectures, demonstrations, and experiments.

2. **Ethics.** Three recitations a week, second semester; required in the junior year of the Courses in Agriculture, Home Economics and General Science. The beginning and development of different views of the moral life. Psychological basis; theories of the moral standard; institutions of the moral life; practical problems in private and public morality. Course consists of lectures, discussions, and reports on assigned topics; based upon such texts as Dewey and Tuft's, Paulsen, Bowne and Mackenzie.

3. **History of Education.** Three recitations a week, first semester; elective in the senior year of the Courses in Home Economics and General Science. Development of aims and methods of education from primitive peoples to modern times, noting their relation to contemporary philosophy and social life. Lectures, discussions and reports on assigned topics; based upon Monroe, Davidson, Kemp and others.

4. **The Principles of Education.** Three recitations a week, second semester; elective in the senior year of the Courses in Home Economics and General Science. The aim of this course is to give the student a knowledge of psychological principles as applied to education, rather than to study details of methods. An effort is made to reveal the essential nature and function of education and the kind of technique necessary to secure the best results in teaching. Lectures, discussions and reports; based upon Bagley's *The Educative Process*, and Hall's *Youth*, and Tyler's *Growth and Education*.

---

## **Department of Mathematics and Astronomy**

PROFESSOR BROWN, MR. WHITEHEAD.

The general work of this department is planned to cultivate habits of systematic and accurate thinking, as well as facility in



making calculations. Independent effort is encouraged to the greatest possible extent, the solutions of problems and original demonstrations forming an important part of each course.

The class work in general astronomy is supplemented by the use of instruments in the observatory. These include a six-inch equatorial telescope, a transit instrument, a sidereal clock and a chronograph.

For description of Mathematics 1 to 6, see the preparatory department.

7. **Solid Geometry.** Three recitations a week, first semester; required in the Courses in Pharmacy and Engineering; elective in the General Science Course, freshman year; prerequisite, Mathematics 6. All the important principles of the subject will be covered. Text: Sanders' Plane and Solid Geometry.

8. **Advanced Algebra.** Three recitation a week, second semester; required in the Courses in Pharmacy and Engineering; elective in the General Science Course, freshman year; prerequisite, Mathematics 4. Graphs, permutations and combinations, complex numbers, elementary theory of equations, determinants, partial fractions.

9. **Plane Trigonometry.** Two recitations a week, second semester; required in the freshman year of the Courses in Pharmacy, Agriculture and Engineering; elective in the freshman year of the General Science Course, freshman year; prerequisite, Mathematics 6. The elementary notions of trigonometry; solutions of plane triangles.

10. **Plane and Spherical Trigonometry.** Two recitations a week, first semester; required in the Engineering Courses, elective in the General Science Course, sophomore year; prerequisite, Mathematics 8 and 9.

11. **Analytic Geometry and Calculus.** Five recitations a week, first semester; required in the Engineering Courses, elective in the General Science Course, sophomore year; prerequisite, Mathematics 8 and 9. The greater part of the semester will be devoted to analytic geometry.

12. **Calculus.** Five recitations a week, second semester; required in the sophomore year of the Engineering Courses, elective in the junior year of the General Science Course; prerequisite, Mathematics 11. Continuation of Mathematic 11.

13. **Analytic Mechanics.** Five recitations a week, first semester; required in the junior year of the Engineering Courses, elective in the senior year of the General Science Course; prerequisite, Mathematics 12. The application of analytic geometry and calculus to the solutions of mechanical problems.

14. **Analytic Mechanics.** Five recitations a week, second semester; elective in the senior year of the General Science Course. Continuation of 13.



15. General Astronomy. Four recitations a week, second semester; required in the senior year of the Courses in General Science, Home Economics and Engineering; prerequisite, Mathematics 6. The text will be covered and frequent use made of the instruments. Text: Young's Manual of Astronomy.

---

## Department of Physics

PROFESSOR MATHEWS, MR. HOY.

From the fact that physics is one of the foundation sciences and that a knowledge of its laws is necessary to every student seeking a scientific training, the department has been well fitted with rooms and appliances to provide this training. Its lecture rooms are well provided with arm-rest chairs. The laboratories are well lighted and provided with non-vibratory piers. Water, gas and electricity are provided for the recitation rooms and the dark room and laboratories.

This department is housed in the engineering and physics building. Its facilities and equipment for instruction are equal to those of any in the Northwest.

The laboratory equipment includes such expensive pieces as analytical balances, laboratory clock making electrical contact every second, cathetometer, spectroscopes, microscope, photometers, stereopticon and reflectoscope (arc light), standard cells, dynamos, electromotors, transformers, galvanometers, storage battery, induction coils, ammeters, magnetometers, voltmeters, wattmeters, Wheatstone bridges, polariscope, quadrant electrometer, lathes and wireless telegraphy and X-Ray apparatus.

The following subjects are offered in this department:

For a description of Physics 1 and 2, see the preparatory department.

3. General Physics. Three recitation and laboratory periods a week, first semester; required in the sophomore year of the Courses in Engineering and Pharmacy, in the junior year of the Agriculture Course, and in the sophomore or junior year of the General Science Course. Young ladies following the General Science Course may elect Home Economics 4 and 7 instead of Physics 3; prerequisite, Physics 2 and Mathematics 9. Mechanics of solids and fluids and heat with numerous examples. Static electricity and magnetism. Exact measurement of mass, distance, time, calorimetry,

etc.; study of electrical and magnetic fields. Texts: Hastings and Beach; Austin and Thwing.

4. General Physics. Three recitations and two laboratory periods a week, second semester; required in the same courses as Physics 3, except in the Agriculture Course; young ladies pursuing the General Science Course may elect Home Economics 3 instead of Physics 4; prerequisite, Physics 3. Electricity and its applications in the dynamo, motor and transformer, electric light and study of electrical and magnetic fields; nature and velocity of sound, refraction and reflection of light, interference and color, laboratory work on topics mentioned. Text: Hastings and Beach; Austin and Thwing.

5. Advanced Physics. Four recitations and one laboratory period a week, first semester; elective in the junior or senior year of the General Science Course; prerequisite, Mathematics 12 and Physics 4. Mechanics, kinematics, kinetics, mechanics of fluids and heat and its application; magnetism, static electricity, electrolysis, laboratory work and measurements covering topics mentioned. Texts: Nicohs and Franklin, Vols. 1 and 2; Nichols' Laboratory Guide.

6. Advanced Physics. Four recitations and one laboratory period a week, second semester; elective to the same class as Physics 6. Induction currents, primary batteries, electric oscillations and waves, nature and motion of sound, physical theory of music, nature and propagation of light, refraction, reflection, interferences, color and polarization; laboratory work. Text: Nichols and Franklin, Vol. 3; Nichols' Laboratory Guide.

7. Heat. Three recitations and one laboratory period a week, first semester; elective in the senior year of the General Science Course; prerequisite, Physics 6. Sensible and latent heat, dynamical generation of heat, thermometry, calorimetry, specific heat, atomic and molecular heat capacities, evaporation, ebullition, vapor densities, cooling, diathermacy, conductivity and dynamical equivalent of heat, laboratory work covering topics mentioned. Text: Preston's Theory of Heat; Maxwell's Heat.

8. Light. Three recitations and one laboratory period a week, second semester; elective to the same classes as Physics 7, of which it is a continuation. Text: Preston's Light. Shadows and images, spectrum, velocity of light, color, phosphorescence, fluorescence, diffraction, measuring waves, prisms and polarization; laboratory work.

---

## Department of Botany

PROFESSOR OLIVE, MR. —————

In the work of this department, the structure, physiology, classification and pathology of plants, and the fundamental

problems of cell structure and functions are studied, as well as the direct application of the science to pharmacy and agriculture. Both the elementary and advanced laboratories are equipped with new and modern microscopes and other necessary apparatus for carrying on advanced and original research work. The department also has a fairly complete and convenient herbarium of the phanerogamic and mycological flora of the northern United States.

1. General Botany. Two recitations and three laboratory periods a week, first semester; required in the sophomore year of the Courses in Agriculture, Home Economics and Pharmacy, elective in the sophomore year of the General Science Course; prerequisite, the work of the freshman year. The general principles of biology as illustrated by plants; a study of the life histories of types of plants, including their physiology and systematic relations. A course designed to give a general knowledge of the plant kingdom and to develop powers of accurate observation.

2. General Botany. Two recitations and three laboratory periods a week, second semester; required and elective in the same courses as Botany 1, of which it is a continuation; prerequisite, Botany 1.

3. Plant Anatomy and Physiology. One recitation and two laboratory periods a week, first semester; required in the horticulture and the agronomy groups, Agriculture Course, senior year; elective in the junior year of the General Science Course and in the senior year of the Home Economics Course; prerequisite, Botany 1 and 2. A study of the structure and physiology of plant cells and their arrangement into tissues, together with their general physiological relations.

4. Mycology and Plant Pathology. Two laboratory and lecture periods a week first semester; required and elective in the same classes as Botany 3; prerequisite, Botany 1 and 2. Special morphology and classification of the fungi. The plant diseases of economic importance are especially emphasized, together with the methods of prevention or of treatment.

5. Taxonomy of Pteridophytes, Gymnosperms and Angiosperms. Five recitation and laboratory periods a week, second semester; required and elective in same classes as Botany 3; prerequisite, Botany 1 and 2.

6-7. Cytology and Botanical Microtechnique. Two recitations and three laboratory periods a week, throughout the year; elective in the senior year of the General Science Course; prerequisite, Botany 1, 2 and 3. Lectures, recitations and laboratory work on the general activities, reproduction and nutrition of the plant cell. The theoretic-



al bearing of the subject on heredity, plant breeding, etc. Methods of imbedding, sectioning and staining.

8. Pharmacognosy. Five recitation and laboratory periods a week, second semester; required in the junior year of the Course in Pharmacy; prerequisite, Botany 1. The sources, characteristics, identification, etc., of the common drugs.

---

## Entomology and Nature Study

PROFESSOR MATHESON.

The work of this department is conducted in conjunction with the botanical department which is located in the Botany and Horticultural Building. The botanical laboratory is provided with all the apparatus necessary for biological work and the equipment will be available for use in this department.

The following work is offered:

For description of subjects 1 and 2, see preparatory department.

3-4. Entomology. Two recitation and laboratory periods a week, first and second semesters; required in the junior year of the animal husbandry and horticulture groups, in the senior year of the agronomy group, Agriculture Course; prerequisite, Zoology 3. A general course dealing with the anatomy, classification and life histories of insects. It will consist of lectures, recitations and laboratory work throughout the year. The work during the second semester will be largely devoted to the discussion of the more important insect pests and of methods of controlling them. Texts: Comstock's Manual for the Study of Insects; Comstock and Kellog's Elements of Insect Anatomy.

5-6. Elementary Systematic Entomology. Two laboratory periods a week throughout the year; elective. This course has for its object the acquaintance of the student with the more common forms of insect life. Each student will be required to do his own collecting, arranging and mounting of specimens. Prerequisite, Entomology 3 and 4.

7. Bird Life. One lecture and one laboratory period or field excursions a week, second semester; elective. The lectures will deal with the various phases of bird life. The laboratory and field work will be designed to acquaint the student with the more common species of birds, particularly with reference to their field identification. Each student should provide himself with a pair of opera or field glasses and a copy of Chapman's Handbook of Birds of Eastern North America or Florence Merriam Bailey's Handbook of Birds of Western North America.



8. **Nature Study.** Three recitations a week, first semester; elective in the junior or senior year of the General Science Course, and in the senior year of the Home Economics Course; prerequisite, Zoology 3 and Botany 2. Lectures and discussions of methods. This course is intended for those who expect to teach in the public schools of the state. Its object will be to give the nature-study point of view in the teaching of the natural sciences in the first six or eight grades. It will be a discussion of methods and materials rather than a course in elementary science, and will deal primarily with the biological side of nature-study.

---

## Department of Zoology

DR. MOORE, MR. ALTON.

The work offered by this department is designed, first, to give the student a general knowledge of the principles of animal biology; second to give especial attention to technique and to the development of originality in the individual. Students contemplating the study of medicine may by a judicious selection of subjects in this and other departments secure an equivalent of the first year's work offered by the medical colleges.

The department is adequately equipped with specimens and apparatus, to which frequent additions are made.

For description of Zoology 1, see the preparatory department.

2-3 **General Zoology and Physiology.** Two recitations and three laboratory periods a week, first and second semesters; required in the sophomore year of the Courses in Agriculture and General Science, and in the junior year of the Home Economics Course; prerequisite, Art 1 and all the subjects below the sophomore year.

a, **General Zoology.** A study of type forms of invertebrates and vertebrates, and the elements of histology and embryology. Texts and references: Hertwig's Manual of Zoology; Parker and Haswell's Text-book of Zoology; Lange's Comparative Anatomy.

b, **Physiology.** This subject continues throughout the last half of the second semester. Lectures, recitations, demonstrations, and required readings in advanced human physiology. Texts and references: Thornton's Human Physiology; American Text-book of Physiology; Landois' Human Physiology; Verworn's General Physiology.

c, **Veterinary Physiology.** Required of students of agriculture during the last half of the second semester instead of human physiology. Text: F. Smith's Manual of Veterinary Physiology.

4-5. **Anatomical Methods.** Three recitations and two laboratory periods a week, first and second semesters; required in the junior year of the Pharmacy Course. This subject is intended to acquaint students preparing for the study of medicine with anatomical nomenclature, and methods of dissection. It includes the study of the anatomy of the cat, with special reference to physiology. Texts: Davidson's *Mammalian Anatomy*; Riegart and Jennings' *Anatomy of the Cat*; Morris' *Human Anatomy*.

6-7. **Histology.** Five recitations and laboratory periods a week, first and second semesters; required in the senior year of the veterinary group, Agriculture Course, elective in the junior year of the General Science Course; prerequisite, Zoology 3 or 5. The structure of the cell and the tissue elements together with microtechnique during the first semester; vertebrate organology, the microscopic structure of vertebrates during the second semester. Texts and references: Bohm-Davidoff's *Text-book of Histology*; Wilson's *The Cell*; Stohr's and Szymonowics-MacCallum's *Text-books of Histology*.

8-9. **Embryology.** Five recitations and laboratory periods a week, first and second semesters; elective; prerequisite, Zoology 3. This course is designed to meet the needs of those who desire to gain an insight into embryological problems. Besides the study of the development of a number of forms, both vertebrate and invertebrate, the work will include the study of the organization, maturation and fertilization of the egg. Texts and references: Hertwig's *Text-book of Embryology*; Foster and Balfour's *Elements of Embryology*; Korschelt and Heidns, *Text-book of Comparative Embryology*.

10-11. **Comparative Anatomy of the Vertebrates.** Five recitations and laboratory periods a week, first and second semesters; elective in the senior year of the General Science Course; prerequisite, Zoology 5 or 7. An elective designed for those students especially interested in anatomy and zoology. Text and references: Wiedersheim's *Comparative Anatomy*; Flower's *Osteology of the Mammalia*; Jayne's *Mammalian Anatomy*; Huxley's *Manual of the Anatomy of the Vertebrate Animals*.

---

## Department of Chemistry

PROFESSOR SHEPARD, MR. KOCH, MR. VIOL.

This department is equipped with the latest and most approved appliances for instruction.

The student upon beginning the subject is assigned a desk in the main laboratory. This desk is supplied with a set of reagent bottles, gas and water fixtures. In addition to these a

supply of all needful apparatus, such as test tubes, generating flasks and the like are furnished. The main laboratory, which is located on the first floor of the Chemistry and Pharmacy Building, accommodates sixty-four students all working at the same time.

Upon completing the necessary elementary work the student now finds a quantitative laboratory at his disposal. This laboratory accommodates twenty students working together. It is supplied with all quantitative apparatus, such a precipitation flasks, desiccators, lamps and crucibles.

In connection with the quantitative laboratory is a balance room supplied with high grade Troemer quantitative balances. The work is so planned that the student has laboratory work together with didactic instruction throughout the course.

The experiment station laboratories are also located at this college, and their costly and technical appliances and the practical work in constant progress there are within reach for instruction.

1. Elementary Inorganic Chemistry. Five recitations and laboratory periods a week, first semester; required in the freshman year of all the four year courses; prerequisite, Physics 2. History of chemistry, elements, compounds, symbols, valence, atomic weights, chemical equations, oxygen, hydrogen, nitrogen, chlorine, bromine, fluorine, iodine, sulphur, phosphorus, silicon and their compounds. Bases, salts, acids and alkalies. The metals and their compounds, separation of metals, groups of metals and uses of their compounds. Detection of the non-metallic elements and their compounds. Text: Shepard's Elements of Chemistry.

2. Elementary Organic Chemistry. Five recitations and laboratory periods a week, second semester; required in the freshman year of all the four year courses; prerequisite, Chemistry 1. The principal classes of organic compounds, the characteristics and properties of each class and the uses of their various compounds. Detection of principal metals and the working of a list of unknowns; the detection of principal organic compounds. Text: Shepard's Elementary Organic Chemistry.

3. Quantitative Chemistry. Five recitation and laboratory periods a week, first semester; required in the sophomore year of the Courses in Agriculture and Home Economics, in the junior year of the Pharmacy Course; elective in the sophomore year of the General Science Course; prerequisite, Chemistry 1 and 2. The apparatus and its uses. Explanations of methods of quantitative determinations and reports of students' analyses. The quantitative analyses of typical



**chemical compounds, e. g., calcite, magnesium sulphate, metallic ores and coal. Text: Olsen's Quantitative Chemistry.**

4. **Chemistry and Physiology of Foods.** Five recitations and laboratory periods a week, second semester; required in the junior year of the Pharmacy Course and the dairy group, Agriculture Course; in the sophomore year of the Home Economics Course; elective in the senior year of the General Science Course; prerequisite, Chemistry 1, 2 and 3. Food nutrients, chemical characteristics and offices of same, physiology of same, metabolism, balanced rations, standard dietaries. Study of food adulteration. Experiments in digestion of foods, offices of digestive secretions. Detection of adulterants, coloring matter and preservatives.

5. **Agricultural and Sanitary Analysis.** Five recitation and laboratory periods a week, first semester; elective in the senior year of the General Science Course; prerequisite, Chemistry 1, 2 and 3. **Analysis of foods, feeding stuffs, water.** Use and analysis of disinfectants, germicides, etc. Lectures, Official Methods American Association of Official Agricultural Chemists.

6. **Agricultural Chemistry.** Three recitations a week, second semester; required in the sophomore year of the Agriculture Course, elective in the junior year of the General Science Course; prerequisite, Chemistry 1, 2 and 3. Text: Johnson's Agricultural Chemistry.

7. **Industrial Chemistry.** Three recitations a week, first semester; required in the senior year of the dairy group, Agriculture Course; elective in the junior year of the General Science Course; prerequisite, Chemistry 1, 2 and 3. Chemistry of manufacturing glass, paper, sugar, petroleum, explosives, acids, water, air, mortars, pigments, photography, alkalies and gases. Demonstrations of examples including water pollution, purification, artificial illumination, petroleum, testing fermentation, air contamination, disinfection, ventilation, bleaches and dyeing.

8. **Electro Chemistry.** Three recitation and one laboratory period a week, second semester; required in the junior year of the Course in Electrical Engineering; prerequisite, Chemistry 1, 2 and 3. Electrolysis, separation of compounds by means of the electric current. Uses of electrical furnace in obtaining metals.

---

## Department of Pharmacy

PROFESSOR WHITEHEAD.

The work of this department is intended primarily to teach thoroughly young men and women the science of pharmacy.



The work of the preparatory department is prerequisite to the subjects of this department.

The student finishing the two-year course in Pharmacy may receive the degree of Pharmacy Graduate (Ph. G.). This is the only course of the kind offered in the state and receives the hearty commendation of the State Board of Pharmacy.

This department meets both the preparatory and professional requirements of the New York Educational Department with which it is registered in full. It is also a member of the American Conference of Pharmaceutical Faculties.

This line of work offers many inducements to young men. The requests of the druggists of the state for our graduates are far in excess of the supply and the pure food and drug laws have opened up a new field for young men who are competent drug and food assayists.

The two years of pharmacy work may all be applied towards the degree of Bachelor of Science which is given upon completion of the four-year course in Pharmacy. This longer course is recommended to those who intend to take up the study of medicine or dentistry, or who wish to prepare for teaching the sciences in the high schools of the state.

The fees for work in this department are the same as for other college work, i. e., six dollars tuition and two dollars for each laboratory period per semester.

With the exceptions of I and II the following subjects are all required for both the degree of Pharmacy Graduate and the degree of Bachelor of Science in Pharmacy.

1. Pharmacy Latin. Five recitations a week, first semester, junior year. The subject is taught with special reference to its application in pharmacy. The vocabulary employed is strictly pharmaceutical. Text: Robinson's Grammar of Pharmacy and Medicine.

2. Materia Medica. Five recitations a week, first semester, senior year; also elective in the General Science Course. Medicinal properties, doses and poisonous effects of the various medicines, together with the antidotes which the pharmacist may be required to administer in an emergency, will receive full and careful treatment. Text: Potter's Materia Medica, Pharmacy and Therapeutics.

3. Materia Medica. Five recitations a week, second semester, senior year. Continuation of Pharmacy 2.

4. Pharmacy. Five recitations a week, first semester, senior year; prerequisite, Chemistry 2. Forms and uses of pharmaceutical apparatus, weighing by apothecary and metric systems, specific gravity of solids and liquids, heating apparatus, determination of boiling and melting points, distillation, comminution, solution, precipitation, filtration crystallization, percolation, and study of official medicines, waters, syrups, mucilages, mixtures, spirits, elixirs, liniments, infusions, tinctures, fluid extracts, oleoresins and extracts. Text: Remington's Practice of Pharmacy.

5. Pharmacy Laboratory. Three laboratory periods a week, first semester, senior year. Preparation of waters, syrups, mucilages, etc., mentioned in Pharmacy 4, and must be taken up in connection with it. Text: Remington's Practice of Pharmacy.

6. Pharmaceutical Problems. Two recitations a week, first semester, senior year. Relationship of metric, apothecary, and imperial systems of weights and measures, specific gravity, specific volume, percentage problems, concentration and dilution, alligation and chemical problems. Text: Olberg's Pharmaceutical and Chemical Problems.

7. Pharmacy. Five recitations a week, second semester, senior year; prerequisite, Pharmacy 4 and 5. Official inorganic salts and their compounds, solutions, emulsions, powders, pills, ointments, and plasters; reading prescriptions. Texts: Remington's Practice of Pharmacy, Ruddiman's Incompatibilities in Prescriptions.

8. Pharmacy Laboratory. Five Laboratory periods a week, second semester, senior year; prerequisite, Pharmacy 5 and 6. Compounding of prescriptions, making of inorganic salts, solutions, emulsions, powders, pills, reading and compounding prescriptions. Must be taken same term as Pharmacy 7. Texts: Remington's Practice of Pharmacy, Ruddiman's Incompatibilities in Prescriptions, Olberg's 1,500 Prescriptions, National Formulary.

9. Volumetric Analysis and Drug Assaying. Five recitations and laboratory periods a week, second semester, senior year; also elective in the sophomore year of the General Science Course; prerequisite, Chemistry 3. There are at present in the U. S. Pharmacopoeia 149 volumetric and 35 gravimetric assays. In this subject we endeavor to give enough of this work to enable a student to make any of these assays in an intelligent and accurate manner. The students are required to make their own volumetric and indicator solutions. A short course in urine analysis is given in connection with this work. Texts: U. S. Pharmacopoeia, Schimpf's Volumetric Analysis, Lyon's Pharmaceutical Assaying; lecture notes by the teacher.

10. Veterinary Materia Medica. Three recitations a week, second semester; required in the junior year of the veterinary group, Agriculture Course. A study of the medicinal properties, doses, and uses of the principal drugs used in veterinary medicine. Texts: Winslow's Veterinary Materia Medica and Therapeutics.

11. Chemical Toxicology. Five laboratory periods a week, first semester; prerequisite, Pharmacy 3 and 9. Separation and identification of poisons. Texts: Reeses' Medical Jurisprudence and Toxicology, Antinrieths' Detection of Poisons, Blyth's Poisons, their Effect and Detection.

---

## Department of Music

HENRY H. LOUDENBACK.—Piano, pipe-organ and theoretic branches.

FRANCIS J. HAYNES.—Voice and band instruments.

CARL CHRISTENSEN.—Violin, stringed instruments.

EDNA PERRY.—Assistant in piano.

### DEPARTMENTS.

1. Piano, piano ensembles.
2. Voice, choral organizations.
3. Violin, stringed instruments, orchestra.
4. Pipe-organ.
5. Band instruments.
6. Theoretical studies, as harmony, history of music, etc.

### FREE ADVANTAGES.

1. Faculty recitals.
2. Choral organizations.
3. Piano technic classes.
4. Elements of music class.
5. History of music class.
6. Harmony class.
7. Composition class.
8. Theory of instrumentation and music forms.
9. Orchestra.
10. Pupils' recitals.
11. Piano practice.
12. Sight singing class.

The demand at the present time is for men and women who are equally developed morally, mentally and physically.

The chief function of music is to express and excite emotion, hence the pursuance of the study of music tends to develop the emotional powers, and to refine and uplift the moral qualities.

As the proper study of music requires as much mental concentration as any other line of study, it is equally strengthening to the intellect.

The aim of this department is to furnish the best methods for the acquirement of a thorough musical education and to develop "thinking" musicians, not merely musicians of "feeling" alone.

Opportunity is offered, in connection with the College, for a liberal and practical education, and the heads of the various departments are particular to urge students of music to avail themselves of this opportunity. A mere technical training will not suffice. The most successful teachers and students are those who seek the broadest intellectual development.

The prices charged for tuition in the music department are very reasonable when one considers the many free advantages that are offered.

The faculty consists of teachers of superior ability who are specialists in their respective lines.

The department of music with its various advantages offers almost as good results as can be attained in the acknowledged centers of musical learning.

### EXPENSES.

The following fees will be charged per semester for instruction under the various instructors:

Piano and pedal organ (professor of music), two half hour lessons a week, \$18.00.

Piano (assistant), two half hour lessons a week, \$15.00.

Voice culture (head of voice department), two half hour lessons a week, \$18.00.

Voice culture (assistant), two half hour lessons a week, \$15.00.

Violin, viola, cello (head of violin department), two half hour lessons a week, \$18.00.

Theoretical branches—Free to all eligible students enrolled in department of music, and to those electing them in the General Science Course.

Solfeggio sight singing class, five twenty minute periods a week, free tuition.



Piano practice—Free to all students enrolled in the department of music.

Organ rental—One hour per day, one semester, \$4.00.

Clavier rental—One hour per day, one semester, \$3.50.

Special fees will be charged short course students who desire to pursue any of the branches in the department of music.

Diplomas, \$2.00.

### RECITALS.

Public and private recitals are given frequently by the various members of the faculty and by students. Private recitals, in which all students are allowed to participate are given every week. Students are required to take part in any of these recitals, if prepared. This serves as a special impulse towards earnestness and many accomplish much better work under such an incentive. Aside from this, frequent appearance before others tends to give the student that necessary self-control and repose without which it is impossible to become a finished performer. Attendance at all recitals is obligatory upon all students enrolling in either the academic or collegiate courses.

### CHORAL ORGANIZATIONS AND ORCHESTRA.

A male glee club and a ladies chorus are organized at the beginning of the year, to which any student or faculty member of the college is eligible at the recommendation of the instructor in voice. The two separate organizations are combined the last half of the year as a choral union, the intention being to render some of the choral masterpieces and oratorios and cantatas. All vocal students, and piano and violin students who are eligible, are required to attend the choral union rehearsals unless excused by the chorus leader.

A college orchestra is also maintained, to which any student who is qualified is eligible.

### PLAN OF STUDY.

The plan of study consists of two general courses, the Academic and the Collegiate Courses in Music and the Preparatory Course.

The Preparatory Course is designed for beginners or for those who have not been thoroughly trained in the rudiments of

music, and prepares the student for entrance into the Academic or Collegiate Courses. The time generally required to prepare for entrance into the courses mentioned will vary from one to two years.

The aim of the Academic course is to enable those students who do not care to complete a course of music leading to graduation to become proficient as performers, and to give them a fair knowledge and appreciation of the educative principles of music. At the completion of this course the student will be granted a certificate of proficiency or attainment.

The Collegiate Course leads to graduation and consists of three years' work. Students upon completing the requirements for the second year's work will be granted a teacher's certificate, and upon completing the third year's work will receive a diploma.

It is impossible to give a definite outline of the course of study to be followed, as it will vary according to the pupil's ability. However, some things must be studied, and beyond that the instruction is adapted to the personal needs of each student. The work offered in the different lines of music is described below.

### PIANO-FORTE.

The methods of technical instruction here employed are known as the Virgil clavier and the Leschetitsky methods. The clavier is judiciously used in connection with these methods and each student is required to practice a certain amount of time each day upon one of these instruments.

The three all-important factors in artistic piano playing are a positive technic, a musical touch and repose, and the clavier helps the student acquire these quickly by demanding greater powers of concentration of the will.

The preparatory work in piano embraces eight distinct subjects: (a) mind training; (b) physical development; (c) ear training; (d) technic; (e) rhythmic studies; (f) sight reading; (g) sight playing; (h) memorizing.

Selection will be made from the following list of studies in pursuing this course:

Kohler Studies; Czerny (Liebling's Book I); Gurlitt studies; Loeschhorn, Op. 65 and 52; Kunz, 200 canons; Clementi's Sonatinas;

Kuhlau's Sonatinas; MacDougall's studies in melody playing; easy pieces by modern composers and masters also. Other studies by good composers, not mentioned, may be used.

The piano work required for graduation in the Collegiate Course in Music extends throughout three years and is as follows:

#### FIRST YEAR.

Heller, selected studies (Presser edition); Czerny, (Liebling's Book II); Duvernoy, Op. 120; Loeschhorn, Op. 66, Book I; Czerny, Op. 553 (Octaves); Bach first studies; Cramer-Buelow; Beethoven, variations; Beethoven, Sonata, Op. 49 or Op. 79; Mozart Sonata; piano solos by modern and romantic composers.

#### SECOND YEAR.

Bach inventions (two and three voiced); Bach and easy Fugues and Preludes; pedal studies; Beethoven sonata; Czerny, Op. 740; Mendelssohn, Song Without Words; Jensen, Op. 32; Kullak octaves; Moszkowski's scales; solos by Greig, Schubert, Chopin, Schumann and modern composers; first or last movement of a concerto, ensemble work.

#### THIRD YEAR.

Bach-Well tempered clavichord; Chopin, Op. 10 and 25; Moscheles, Op. 70; Clementi, Gradus ad Parnassum; Concerto—Mozart, Beethoven, Mendelssohn, or some other composer; Kullak, octave studies; Suite—Grieg or Schuman; Liszt, transcriptions and original compositions; ensemble work; solos by the masters, both modern and classical; Sonata—Beethoven, Scarlatti or Schubert. A public program of from one hour and thirty minutes to one hour and forty-five minutes in length, to be played in public, unassisted and from memory, will be required of the applicant.

Post graduate work is also offered in this department in the following studies:

Czerny, School of Virtuosity; Bach, organ fugues transcribed by Liszt; Bach—partitas and suites; Scarlatti's sonatas; Chopin, etudes and compositions; Schubert, sonatas and impromptus; Schumann, novelletten. Selections by Brahms, Rubinstein, Henselt, Moszkowski and others. Beethoven sonata; Concertos—Beethoven, Rubinstein, Chopin and others.

#### VOICE.

The preparatory work is as follows:

Simple exercises in tone placement and breath control. Interval study. Scales and Arpeggio. Concone School, Neidlinger and Seiber Vocalises. Simple songs for application of principles. Class work, Solfeggio.

The work in voice required for graduation in the Collegiate Course in Music scheduled below extends throughout three years, as follows:

#### FIRST YEAR.

Tone placement and breath control. Scales and Arpeggios; Legato and Staccato; Concone daily exercises and vocalises. Panofka, Lamperti and Bordogni vocalises. Song study in phrasing and interpretation. Class work, Solfeggio and choral.

#### SECOND YEAR.

Tone placement and breath control. Daily exercises by Bonaldi, Marchesi and Lablache; vocalises by Panofka and Nava; Spicker Masterpieces; Vaccai Italian studies. Study of the best Standard and Modern Classic Songs. Class work, Normal work in Solfeggio and Methods (optional) and choral.

#### THIRD YEAR.

Study of trill and other musical embellishments. Velocity studies by Girandet, Viardot and others. Spicker masterpieces; Lamperti studies in Bravura; Bordogni vocalises. French, German and Italian songs. Oratorio and operatic arias. Formation of repertory. Class work, choral.

### VIOLIN.

The preparatory work is as follows:

Position tone production on open strings; most important rudiments of musical theory in general; Hofmann's Violin School, Book I; Duets by Gebauer and Mazas; easy solos by miscellaneous composers for violin with piano accompaniment.

The work in violin required for graduation in the Collegiate Course in music scheduled below extends throughout three years, as follows:

#### FIRST YEAR.

Two octave scales in all major and minor keys. Kayser's Etudes Op 20, Book I; Wohlfart Studies, Op. 45, Book I; Mazas, Op 38, Duos for Violin and Piano, Book II; miscellaneous solos for violin with piano accompaniment.

#### SECOND YEAR.

Three octave scales in all major and minor keys; Kayser's Etudes Op. 20, Book II; Wohlfart Studies, Op. 45, Book II; Schradieck's technical studies; Schubert Sonatinas, Op. 137, for violin and piano; miscellaneous solos for violin with piano accompaniment.

#### THIRD YEAR.

Etudes by Kreutzer, Mazas, Dont and Rode; Schradiecke's technical studies; Sonatas by Mozart and Beethoven; miscellaneous solos



by Wieniawski, Mendelssohn, De Beroit, etc.; Concerto by Viotti, De Beroit, etc.

## ORGAN.

The preparatory work is as follows:

Rink Organ School; elements of organ playing, touch, etc.; study of organ registers; easy pieces by modern composers; hymn playing.

Two years of collegiate work is offered along this line upon the completion of which an organist's certificate is granted:

The work is as follows:

### FIRST YEAR.

Buck, choir accompaniment; Buck, pedal phrasing studies; Bach, little preludes and fugues.

### SECOND YEAR.

Bach, little preludes and fugues, Mendelssohn, little preludes and fugues; solo compositions from the classical and modern schools.

## THEORY OF MUSIC.

The subjects along this line extend throughout the three years of the Collegiate Course in Music and are as follows:

### FIRST YEAR.

#### FIRST SEMESTER.

1. Elements of Music. Two recitations a week. Principles of notation; study of rhythm, mensural drills; study of dynamic symbols, abbreviations, etc.

2. Elementary Harmony. Two recitations a week; scale building, diatonic and chromatic, drills in recitation of scales and chords; interval study; formation of major and minor triads; construction of seventh chords; key and chord relationship; ear training and dictation.

#### SECOND SEMESTER.

3. Elements of Music. Two recitations a week. Musical nomenclature; movement; scale and interval study; ear drills; dictation.

4. Elementary Harmony. Two recitations a week. Chord analysis, simple part writing and study of chord succession; study of dominant seventh, minor ninth and diminished seventh chords and their resolutions; practical keyboard work and ear drills.

### SECOND YEAR.

#### FIRST SEMESTER.

5. Harmony. Two recitations a week. Part writing in four parts, open and closed harmony, study of triads, seventh chords and their

resolutions, chords of the augmented sixth, chords and their resolutions, and practical keyboard work.

6. Interpretation of Music. Two recitations a week; elective in the senior year of the Courses in General Science and Home Economics. Accent, motive, phrase, etc.; slur and uses; punctuation of phrase, period, etc.; modes of punctuation, cadences; various kinds of periods; musical devices and details; nuance and ornamentation, signs and symbols; rythm; movement; thematic style; lyric style; harmonic style. Text: Goodrich's Theory of Interpretation.

7. History of Music. Three recitations a week; elective in the senior year of the Courses in General Science and Home Economics. Purpose of study; music of ancients; music of Greeks; ecclesiastical system; notation; music outside the church; Polyphonic Era; various schools; church polyphony music reform; musical instruments; organ and early organists; beginning of opera and oratorio; Neapolitan school; early singing and singers; French and English opera; German opera; evolution of the piano-forte; early English and French clavier schools; German polyphonic clavier school; German sonata composers to Haydn. Text: Baltzell.

## SECOND SEMESTER.

8. Harmony. Two recitations a week. Melody writing and harmonizing of a given melody, modulation and improvisation in a given key. Harmonic and melodic analysis of the classics. Practical keyboard work.

9. Interpretation of Music. Two recitations a week; elective in the senior year of the Courses in General Science and Home Economics. Discord and dissonance; harmonic influence; accompaniment; style and expression; interpretation in general; fugue, tone color, epochs in music; dance forms, modern and classic; miscellaneous forms; romantic forms; mixed forms; rondo form; sonata form; symphonic form; overture, concerto, etc.; song forms, etc.

10. History of Music. Three recitations a week; elective in the senior year of the Courses in General Science and Home Economics. Haydn, Mozart, Beethoven; Beethoven and sonata; violin and makers, violin playing and violin music; orchestra and absolute music; romantic opera; Italian school of 19th century; Wagner's music dramas; other schools; piano playing and composition; Clementi to Field; Romantic school and its masters; pianists and teachers since Liszt; Oratorio after Mendelssohn; symphonic poem in Germany; German opera since Wagner; old and new schools in France; musical regeneration in Italy, England and the Netherlands; National schools, Bohemia and Scandinavia; music in the United States; American composers; musical education.

## THIRD YEAR.

## FIRST SEMESTER.

11. Advanced Harmony. Three recitations a week. Melody writing. Harmonizing of melodies; improvisation; single and double counterpoint.

## SECOND SEMESTER.

12. Advanced Harmony. Three recitations a week. Canon and fugue; analysis of fugues; original composition.

13. Psychology and its Relation to Music. Two recitations a week. The object of this class is to study the application of psychological principles to the study of music. The different subjects to be discussed are: nature of music; musical faculty; concept mass and psychic life; means of musical expression; habit; association; memory; imagination; the feelings and emotions; the will.

## COLLEGIATE COURSE.

Students desiring to pursue this course must have completed the requirements for admission to the freshman year in college:

## FIRST YEAR.

## First Semester—

Elements of Music, a 2.....	Theory of Music	1
Elementary Harmony, a 2.....	Theory of Music	2
Piano technic (piano students), a 1.....		
Piano, violin or voice, a 2.....		
Piano, (violin or voice students), a 2.....		
Sight singing, a 5.....		
Physical Culture, 2, or Military, 3.....		
One of the following as an elective:		
Rhetoric, a 4.....	English	7
German, a 4.....	German	1
French, a 4.....	French	1

## Second Semester—

Elements of Music, a 2.....	Theory of Music	3
Elementary Harmony, a 2.....	Theory of Music	4
Piano technic (piano students), a 1.....		
Piano, violin or voice, a 2.....		
Piano, (violin or voice students), a 2.....		
Sight singing, a 4.....		
Physical Culture, 2, or Military, 3.....		
Elective, a 4.....		
Rhetoric, a 4.....	English	8
German, a 4.....	German	2
French, a 4.....	French	2

## SECOND YEAR.

## First Semester—

Harmony, a 2.....	Theory of Music	5
Interpretation and music forms, a 2.....	Theory of Music	6
History of music, a 3.....	Theory of Music	7
Piano, violin or voice, a 2.....		
Piano technic (piano students), a 1.....		
Physical Culture, 2, or Military, 3.....		
Elective, a 4.....		
Chaucer and History of English Language, a 4...	English	9
German, a 4.....	German	3
French, a 4.....	French	3

## Second Semester—

Harmony, a 2.....	Theory of Music	8
Interpretation and music forms, a 2.....	Theory of Music	9
History of music, a 3.....	Theory of Music	10
Piano, violin or voice, a 2.....		
Piano technic (piano students), a 1.....		
Physical Culture, 2, or Military, 3.....		
Elective, a 4.....		
Elizabethan drama, a 4.....	English	10
German, a 4.....	German	4
French, a 4.....	French	4

## THIRD YEAR.

## First Semester—

Advanced harmony, a 3.....	Theory of Music	11
Psychology, a 3.....	Philosophy	1
Piano, violin or voice, a 2.....		
Piano technic (piano students), a 1.....		
Vocal culture (piano students) a 2 (violin students).....		
Physical Culture, 2, or Military, 3.....		
Elective .....		
Advanced rhetoric, a 2.....	English	11
German, a 3.....	German	5
French, a 3.....	French	5

## Second Semester—

Advanced Harmony, a 3.....	Theory of Music	12
Psychology and its relation to music.....	Theory of Music	13
Piano, violin or voice, a 2.....		
Piano technic (piano students), a 1.....		
Vocal culture (piano students), a 2.....		
Physical Culture, 2, or Military, 3.....		
Elective .....		
Advanced rhetoric, a 2.....	English	12
German, a 3.....	German	6
French, a 3.....	French	6



## ACADEMIC COURSE.

Any student wishing to pursue this course in full must have completed the eighth grade of the public schools and take each of the subjects named below:

## FIRST YEAR.

## First Semester—

Elements of music, a 2.....	Theory of Music	1
Sight singing, a 4.....		
Piano, voice or violin, a 2.....		
Piano technic (piano students), a 1.....		
Piano (voice students), a 2.....		
Composition, a 5.....	English	1
Arithmetic, a 5.....	Mathematics	1
Latin, a 5.....	Latin	1
Military, 3, or Physical Culture, 2.....		

## Second Semester—

Elements of music, a 2.....	Theory of Music	2
Sight singing, a 4.....		
Piano, voice or violin, a 2.....		
Piano technic (piano students), a 1.....		
Piano (voice students), a 2.....		
Composition, a 5.....	English	2
Algebra, a 5.....	Mathematics	2
Latin, a 5.....	Latin	2
Military, 3, or Physical Culture, 2.....		

## SECOND YEAR.

## First Semester—

Elementary harmony, a 2.....	Theory of Music	3
Piano, voice or violin, a 2.....		
Piano technic (piano students), a 1.....		
Piano, (violin students), a 2.....		
Composition and rhetoric, a 5.....	English	3
Algebra, a 5.....	Mathematics	3
Latin, a 5.....	Latin	3
Military, 3, or Physical Culture, 2.....		

## Second Semester—

Elementary harmony, a 2.....	Theory of Music	4
Piano, voice or violin, a 2.....		
Piano technic (piano students), a 1.....		
Piano, (violin students), a 2.....		
Composition and rhetoric, a 5.....	English	4

---

Algebra, a 5.....	Mathematics 4
Latin, a 5.....	Latin 3
Military, 3, or Physical Culture, 2.....	

## THIRD YEAR.

## First Semester—

Interpretation and music forms, a 2.....	Theory of Music 6
Piano, voice or violin, a 2.....	
Piano technic (piano students), a 1.....	
Composition and English Literature, a 5.....	English 5
Elementary physics, a 3, b 2.....	Physics 1
Military, 3, or Physical Culture, 2.....	

## Second Semester—

Interpretation and music forms, a 2.....	Theory of Music 9
Piano, voice or violin, a 2.....	
Piano technic (piano students), a 1.....	
Composition and literature, a 5.....	English 6
Elementary physics, a 3, b 2.....	Physics 2
Military, 3, or Physical Culture, 2.....	

N. B.—The preparatory work required for entrance to the Academic Course in either piano, violin or voice is the same as for the Collegiate Course.

The piano work required for the completion of the Academic Course in Music extends throughout three years and is as follows :

## FIRST YEAR.

Heller, Op. 47; Duvernoy, Op. 120; Mozart sonata; Czerny, (Liebling's Book II) piano solos by modern and romantic composers. Loeschhorn, Op. 66.

## SECOND YEAR.

Bach, first studies; pedal studies; Mendelssohn, two songs without words; Czerny, Op. 553; Beethoven variations, solos by Grieg; Schubert, Schumann and other modern writers.

## THIRD YEAR.

Bach, little preludes and fugues; Kullak octaves; Beethoven sonata; Czerny, Op. 740; solos by Weber, Chopin, Field, Schumann and others.

The three years work in violin required for completion of the Academic Course is as follows :

## FIRST YEAR.

Blumenstengel, scale studies; Kayser, Op. 44, studies; Mazas, Op. 38, Book I, sonatinas for violin and piano; miscellaneous solos with piano accompaniment.

**SECOND YEAR.**

Two octave scales in all major and minor keys; De Beriot's Method Book I for study of the positions; Wohlfart, Studies Op. 45 Book I; Duets by Mazas and Kalliowoda; miscellaneous solos with piano accompaniment.

**THIRD YEAR.**

Three octave scales in all major and minor keys; Kayser's Etudes Op. 20; Wohlfart Op. 45, Book II; Denda Op. 74, School of Mechanism; solos with piano accompaniment by Dancla, De Beriot, Bohm, Wieniawski and others.

The following work will be required in voice for completion of the three years Academic Course:

**FIRST YEAR.**

**Tone placement and breath control.** Scales and Arpeggio; Legato and Stacatto. Daily exercises by Pinsuti, Nava and Behnke; Neidlinger and Sieber vocalises; Concone School. Simple songs for application of principles. Class work—Solfeggio and choral.

**SECOND YEAR.**

**Tone placement and breath control.** Concone daily exercises; vocalises by Concone, Panofka, Bordogni and Lamperti. Song study in phrasing and interpretation. Class work—Solfeggio and choral.

**THIRD YEAR.**

**Tone placement and study of musical embellishments.** Daily exercises by Bonaldi, Marchesi and Lablache; vocalises by Nava, Panofka, Sieber, Spicker masterpieces, Vaccai Italian studies. Modern and classic songs; interpretation. Class work—Normal work in Solfeggio (optional) and choral.

---

## **Department of Art**

MISS CALDWELL, MISS GODDARD.

The aim in arranging the subjects in this department has been to offer such work as shall correlate with other college courses in becoming a means to a general education. The object of the work is to cultivate an appreciation of beauty and to develop technical skill.

The department is equipped with a good collection of casts and photographs, and with such tools as are necessary for class work.

A certificate is given to students who satisfactorily complete a course in academic drawing and painting, consisting of Art 1, 2, 6, 7, 8, 9 and 10, or a course in decorative design and handicraft, consisting of Art 1, 2, 4, 5, 6, 7, 11.

The time necessary to secure a certificate depends on the ability of the student, three years being an average length of time, although the work may be extended over a longer period and carried with a regular college course.

For description of Art 1 and 2 see the preparatory department.

3. Theory of Design. Two recitations a week, second semester; required in the freshman year of the Home Economics Course; prerequisite, Art 1. This subject treats of the principles of design and their practical application in the home. The history of ornament is briefly reviewed.

4. Theory and Practice of Design. Four recitations and laboratory periods a week, first semester; elective in the senior year of the General Science Course; prerequisite, Art 1. Two periods a week for lectures and criticism of original designs and three periods for the carrying out of the designs in various crafts, such as leather and metal work, and wood-carving.

5. Theory and Practice of Design. Four recitations and laboratory periods a week, second semester; elective in the senior year of the General Science Course; prerequisite, Art 1 and 4. Continuation of Art 4, with the addition of the study of historic ornament.

6. Art History. Two recitations a week, first semester, required in the Home Economics Course; elective in the General Science Course, senior year. History of architecture and sculpture.

7. Art History. Two recitations a week, second semester; required in the Home Economics Course, elective in the General Science Course, senior year. History of painting. Reference books in the general library, and a collection of photographs in the department, furnish material for this course.

8. Antique Class. Five hours a week, first and second semesters; elective to students pursuing special work in art; prerequisite, Art 1 and 2. Study of heads from the antique in full light and shade for construction and modelling; figure drawing from the antique; sketching from life.

9. Study of Values. Five hours a week, first and second semesters; elective to students pursuing special work in art; prerequisite, Art 1 and 2. Value studies in charcoal and still-life as preparatory work for painting.

10. Painting. Two laboratory periods a week, first and second semesters; elective to students pursuing special work in art; prerequisite, Art 9. Still life and flowers in oil, pastel and water-color.



11. Design and Handicraft. Four hours a week, first and second semesters; elective to students pursuing special work in art; prerequisite, Art 5. Plant and animal form in designs, original designs in color to be applied in the crafts, and in needle-work in the home economics department. The crafts offered are leather and metal-work, wood carving, pyrography and basket-weaving.

12. Normal Course. Five hours a week, first and second semesters; elective to college students; prerequisite, Art 1. In this course such work is given in drawing, color, and design, as will be an aid to students intending to teach in the public schools. Outlines for the different grades are discussed.

---

## Department of Military Science and Tactics

CAPTAIN CHRISMAN, COMMANDANT.

The work of this department is conducted in accordance with War Department orders promulgated pursuant to Acts of Congress.

Instruction in military science and tactics in educational institutions throughout the United States forms a part of the present general system of military training; its function is to impart to the college youth of the land knowledge of the elements of military science and the duties of the soldier in the garrison and in the field in order that the people may receive the benefit of more efficient service when final resort to arms to sustain the national honor or to enforce the laws shall become necessary.

Direct benefits of lasting value are received by the individual cadet which contribute to strengthen his physique and mentality, the better to fit him for the duties of life.

The instruction is both practical and theoretical, as follows:

### PRACTICAL.

Infantry drill regulations; firing regulations for small arms; field service regulations; manual of guard duty. Three hours a week required for all able bodied male students in the sophomore, freshman and preparatory classes and special students; optional for seniors and juniors, who may elect further work in the department subject to approval; they may also be required to turn out on special occasions by direction of the commandant upon approval of the president.

### THEORETICAL.

Infantry drill regulations; firing regulations for small arms; field service regulations; manual of guard duty; army regulations. This

course is progressive and required for commissioned and non-commissioned officers, one hour a week. Lectures by the Commandant on various military subjects will be delivered monthly before all cadets.

### THEORETICAL—ELECTIVE.

**Military Law.** Junior year, first semester, one hour a week.

**International Law.** Junior year, second semester, one hour a week.

**Field Service Regulations and Military Engineering.** Senior year, first semester, one hour a week.

**Applied Tactics.** Senior year, second semester, one hour a week.

All students herein referred to constitute the corps of cadets and are organized for the purpose of drill and administration as an infantry battalion, with a band to which qualified cadets are specially assigned.

The appointment and promotion of commissioned and non-commissioned officers are made in accordance with merit by the commandant subject to the approval of the president.

The College is provided by the U. S. government with the equipment necessary to conduct the department. Each cadet must provide himself with the prescribed uniform.

The following is an extract from War Department orders:

“Upon the graduation of every class, the professor of military science and tactics shall, after consultation with the president of the college \* \* \*, decide upon and report to the adjutant general of the army the names of such students belonging to the class as have shown special aptitude for military service, and shall furnish a copy of his report to the adjutant general of the state for his information”

---

## Preparatory Department

PROFESSOR FORSEE, MISS YOUNG.

The work of this department is prerequisite to all full courses offered in the institution. The course as it is now arranged is the equivalent of the four years' high school course for city schools, adopted by the High School Committee. It contains all the constants of that course, except the fourth year in English. Standings from the public schools of the state, at the direction of the Principal of the department, may be accepted and credit given for the same grade of work completed therein. The students of this department are under the supervision of an experienced member of the faculty, who superin-

tends their work and strives to secure the forming of correct habits of life on the part of all.

Students will be admitted to this department upon completion of the eighth grade work in the public schools.

The Franklin Literary Society is composed of preparatory and short course students, or students of equal rank. This work is also under the supervision of the Principal of the department.

The following subjects are offered and are required for completion of the work:

### ENGLISH.

1. Composition. Five recitations a week, first semester. Choice of words, meaning of words, preferred usage according to best authorities. Text to be announced.

2. Composition. Five recitations a week, second semester; prerequisite, English 1. Kinds of composition; study of description; paragraphing; narration; clearness; letter writing; choice of words; exposition and argument. Text to be announced.

3. Composition and Rhetoric. Five recitation a week first semester. This work affords the student practice in composition, an introductory knowledge of the principles of rhetoric and an acquaintance with certain masterpieces of English literature. Herrick and Damon's Composition and Rhetoric for Schools is used as a text-book. Of the selected classics some are used for rapid reading, others for careful study in class.

4. Composition and Rhetoric. Five recitations a week, second semester. A continuation of English 3.

5. Composition and Literature. Five recitations a week, first semester. In this the work of the preceding year is continued. Selected English classics are read, and upon them the composition work is largely based. The history of American literature is also studied.

6. Composition and Literature. Five recitations a week, second semester. A continuation of English 5.

### LIBRARY.

With a view to facilitating the student's use of the library the following courses are given:

1. Library. One recitation a week, first semester. The use of indexes and abbreviations; the card catalogue; classification; use of dictionaries, and encyclopedias; the leading periodicals; periodical indexes.

2. Library. One recitation a week, second semester. The history and relative value of dictionaries and encyclopedias; special encyclopedias; other reference works; U. S. government publications.



---

LATIN.

1. Latin. Five recitations a week, first semester. Primary principles of the language, including inflection and syntax with special attention to etymology, showing the relation of Latin stems to English words. Text: *Bellum Helveticum*.

2. Latin. Five recitations a week, second semester. Continuation of Latin 1. *Bellum Helveticum* completed. ,

3. Latin. Five recitations a week, first semester. Caesar, Books I, II and III.

4. Latin. Five recitations a week second semester. Caesar, Book IV; Cicero's Orations against Cataline, I and II.

## HISTORY.

1. U. S. History. Five recitations a week, first semester; prerequisite, a knowledge of the history of the United States to the Colonial Period. A study of the conditions during the Colonial Period; Revolutionary War and War of 1812; industrial development of our country; the long struggle with slavery; the indestructibility of the Union; the economic struggle; the growth of the Northwest. Text to be announced.

2. Civics. Five recitations a week, second semester. General principles of government; branches of government; a close study of the constitution; comparison between the principles of the national government and that of our own state; principles of law; contracts in general. Text to be announced.

3. Greek History. Three recitations a week, first semester; History of Greece with brief preliminary survey of oriental history. The history of Greece and Rome is regarded as a study of the evolution of Greek and Roman institutions. Events are considered in their bearing on that evolution. A text-book is used, supplemented by other material. Text: *West's Ancient World*.

4. Roman History. Three recitations a week, second semester. History of Rome with special emphasis upon the institutions of the empire. The work of this course includes the period of transition to the year 800 A. D. Text: *West's Ancient World*.

5. English History. Three recitations a weeks, first semester. History of England to 1485. Emphasis upon constitutional points, and upon those institutions from which our own are derived. Text-book, lectures, papers and reports. Text: *Cheyney's Short History of England*.

6. English History. Three recitations a week, second semester. Continuation of History 5. The Tudors and the Reformation; the Stuarts and Parliament; England under Parliamentary rule; the era of reform; democracy and empire. Text: *Cheyney's Short History of England*.



### MATHEMATICS.

1. Arithmetic. Five recitations a week, first semester; prerequisite, a knowledge of Arithmetic to percentage. All the principles of percentage; involution; evolution; mensuration and the entire metric system. Text: Southworth-Stone's Arithmetic, Part 3.

2. Algebra. Five recitations a week, second semester. Beginning with the fundamental notions. Text: Milne's Academic Algebra.

3. Algebra. Five recitations a week, first semester. Continuation of Mathematics 2.

4. Algebra. Five recitations a week, second semester. Continuation of Mathematics 3. A general review of quadratics, the progressions, ratios and proportion, logarithms and such other important topics as the time will permit of taking up.

5. Plane Geometry. Four recitations a week, first semester; prerequisite, Mathematics 2. Beginning the subject. Text: Sanders' Plane and Solid Geometry.

6. Plane Geometry. Four recitations a week, second semester; prerequisite, Mathematics 3 and 5. Plane Geometry completed.

### PHYSICS.

1. Elementary Physics. Three recitations and two laboratory periods a week, first semester; prerequisite, Mathematics 2. Properties of matter, mechanics of solids, and mechanics of fluids; nature of light, intensity, velocity and reflection of light; laboratory work showing principle phenomena and proving laws governing them in properties of matter, mechanics of solids and mechanics of fluids; velocity of sound, color and reflection of light. Text: Carhart and Chute's High School Physics; Chute's Practical Physics—Laboratory Manual.

2. Elementary Physics. Three recitations and two laboratory periods a week, second semester; prerequisite, Physics 1. Refraction of light, heat, electricity and magnetism; laboratory work in heat, colorimetry, refraction of light, magnetism, static electricity, detection of electric current and its direction, induced currents and measurements of electrical resistances. Texts: Carhart and Chute's High School Physics; Chute's Practical Physics—Laboratory Manual.

### MECHANICAL ENGINEERING.

1. Carpentry and Wood Turning. Three laboratory periods a week, first semester. Talks on the care and use of different tools. Practice at the bench in making the various joints used in wood construction.

2. Forging. Three laboratory periods a week, second semester. Bending, drawing, up-setting, welding and forging iron; steel manipulation, including cold chisels, punches and lathe and planer tools, tempering and hardening.

5. Mechanical Drawing. Three laboratory periods a week, second semester. Instrumental drawing, geometrical problems and parts

of machines. This work is offered during the entire year, and at hours convenient to teachers and students.

### ZOOLOGY.

1. Elementary Physiology. Four recitations and one laboratory period a week, first semester. This is offered in the the first year of the preparatory course and is designed to meet the requirements for High School physiology. It includes an elementary study of the human body, its physiology, hygiene and sanitation. Text: Hough and Sedgwick's *The Human Mechanism*.

### NATURE STUDY.

1-2. Elementary Biology. Five recitations and laboratory periods a week, first and second semesters. An elementary course dealing with the principles of biology. It will consist of lectures, recitations, and laboratory work. Text-book to be announced later.

### PHYSIOGRAPHY.

1. Three recitations a week, second semester. The relation between the earth and the sun; rivers; weathering of soils, glaciers, their cause and action; land forms, their cause and influence on man; volcanoes, their causes and effect; the atmosphere and its importance; the ocean; life on land and sea; how the physical conditions of the earth affect the life of man. Text: Gilbert and Brigham's *Introduction to Physical Geography*.

### ART.

1. Free Hand Drawing. Three laboratory periods a week, first semester. Elementary Course. Drawing from simple casts in charcoal, theory of perspective; drawing in pencil. This work is arranged to be of direct assistance to students in their several courses in the college.

2. Free Hand Drawing. Three laboratory periods a week, second semester. Charcoal drawing continued; clay modelling from casts and objects; sketching in pencil and pen and ink.

### DOMESTIC ART.

1. Cooking. Three laboratory periods a week, second semester. Designed for those who desire a knowledge of practical cookery. This course also includes instruction in care of the kitchen; serving and washing of dishes.

2. Sewing. Three laboratory periods a week, first semester. This course aims to give students an understanding of the stitches and methods employed in plain sewing. Each student is required to make a suit of underwear. This course or its equivalent is a necessary prerequisite to any other course in needlework in the department.

Following is the scheme of preparatory work:

## PREPARATORY COURSE.

### FIRST YEAR.

#### First Semester—

Composition, a 5.....	English	1
Arithmetic, including Metric System, a 5.....	Mathematics	1
United States History, a 5.....	History	1
Free Hand Drawing, b 3.....	Art	1
Military, 3, or Physical Culture, 2.....		
Elective, 5.....		
Latin, a 5.....	Latin	1
Elementary Physiology, a 4, b 1.....	Zoology	1

#### Second Semester—

Composition, a 5.....	English	2
Algebra, a 5.....	Mathematics	2
Civics, a 5.....	History	2
Military, 3, or Physical Culture, 2.....		
Elective, 6.....		
Latin, a 3, or.....	Latin	2
Physiography, a 3.....	Physiography	1
Free Hand Drawing, b 3, or.....	Art	2
Mechanical Drawing, b 3.....	Mechanical Engineering	5

### SECOND YEAR.

#### First Semester—

Composition and Rhetoric, a 5.....	English	3
Algebra, a 5.....	Mathematics	3
Greek History, a 3.....	History	3
Military, 3, or Physical Culture, 2.....		
Elective, 8.....		
Latin, a 5, or.....	Latin	3
Elementary Biology, a 3, b 2.....	Entomology	1
Cooking, b 3, or.....	Domestic Art	1
Carpentry and Wood Turning, b 3..	Mechanical Engineering	1

#### Second Semester—

Composition and Rhetoric, a 5.....	English	4
Algebra, a 5.....	Mathematics	4
Roman History, a 3.....	History	4
Military, 3, or Physical Culture, 2.....		
Elective, 8.....		
Latin, a 5, or.....	Latin	4
Elementary Biology, a 2, b 3.....	Entomology	2
Forging Iron and Steel, b 3, or..	Mechanical Engineering	2
Sewing, b 3.....	Domestic Art	2

## THIRD YEAR.

## First Semester—

Composition and English Literature, a 5.....	English	5
Plane Geometry, a 4.....	Mathematics	5
Elementary Physics, a 3, b 2.....	Physics	1
English History, a 3.....	History	5
Library Course, a 1.....	Library	1
Military, 3, or Physical Culture, 2.....		

## Second Semester—

Composition and Literature, a 5.....	English	5
Plane Geometry, a 4.....	Mathematics	6
Elementary Physics, a 3, b 2.....	Physics	2
English History, a 3.....	History	6
Library Course, a 1.....	Library	2
Military, 3, or Physical Culture, 2.....		

---

## Department of Commercial Science

PROFESSOR CROSIER.

The commercial department occupies commodious quarters on the second floor of the Central Building. These rooms are exceptionally well suited to the work of the department, and supplied with folding desks, typewriters, offices for carrying on business transactions, such as banking and mercantile work.

This course, including both shorthand and business training subjects, extends through a period of three years, and when the student has satisfactorily completed the work as outlined, he will be given a certificate of graduation, which admits him to the freshman class of the college. The entrance requirements to this department are the same as for the Preparatory Course. Students will be allowed credit for equivalent work done elsewhere, thus enabling them the sooner to complete the work offered. Our aim is to give the specific training necessary, and as broad a general knowledge as possible, at all times endeavoring to do thoroughly the work in hand. No student will be certified to who fails to give us his best effort and has not attained a general average of eighty.

The expenses are the same as for any other work in the institution and far below what is usually charged for such in-



struction. College charges for the semester of eighteen weeks are eight dollars, which includes use of typewriter.

The work offered by the department is as follows:

## FIRST YEAR.

### FIRST SEMESTER.

1. Commercial Geography. Five recitations a week. This course is designed to acquaint the student with those dominant features of industry which determine the quantity and quality of trade; to trace the various avenues of commerce and show the causes that give them **direction and volume, thus enlarging the student's conception of the natural resources and the resultant economic movements which are brought specifically to bear upon every day life.** Text: Adam's Commercial Geography.

2. Book-keeping. Three laboratory periods a week. Single and double entry studied as in actual business; our aim being to acquaint the student in an elementary way with various systems of book-keeping, keeping constantly in mind accuracy and exactness, thus preparing him for the actual practice which is offered later in the year. Penmanship is required with this course. Text: Benton's High School Edition.

### SECOND SEMESTER.

3. Book-keeping. Three laboratory periods a week. Each student will carry on regular transactions through six offices with the student body. While all transactions are of the same general nature, the results are different, thus creating in the individual student the habit of self reliance. All work must be of a certain degree of excellency before the next step can be taken. With this course cheques, drafts, notes, copying letters, writing deeds, mortgages, leases, insurance, etc., that would naturally attend same in actual business, are introduced. Text: Ellis' System of Actual Business Training.

## SECOND YEAR.

### FIRST SEMESTER.

4. Shorthand. Five recitations a week. Consonant stems, vowels, diphthongs, initial and final hooks and circles, word-signs, etc., in logical order; elimination of vocalization through position; the habit of co-ordination emphasized from the beginning; ordinary business letters introduced towards the close of the term. Text: Graham's Amanuensis Phonography.

5. Typewriting. Five one-hour periods a week. Graded exercises on the machine to learn key-board by the touch method; care of the

machine; business letters, law forms, manifolding, mimeographing; department correspondence, speed practice, binding, folding and filing of all kinds of type-written matter. One hour each day. Text: Any standard typewriting manual.

#### SECOND SEMESTER.

6. Shorthand. Five recitations a week. General dictation from Brown's Business Correspondence, Humphrey's Typewriting Manual. Law forms of all kinds, general literary selections. The aim of this term is to complete the student's preparation for actual work. Texts: Music's Universal Dictation; Graham's Amanuensis.

7. Typewriting. Five one-hour periods a week. One hour each day. All amanuensis work of this term to be from shorthand notes. The purpose of this is to give the student power to read notes readily and transcribe the same rapidly. It is especially desirable when practical for the student in shorthand to take typewriting at least two years, as the machine work shows really the finished product of the student's effort. One year is required of all students.

#### THIRD YEAR.

##### FIRST SEMESTER.

8. Elementary Law. Three recitations a week. This subject is designed to acquaint the student somewhat with those fundamental principles underlying our specific law, thus enabling him to pursue more intelligently legal analysis. It is required in the freshman year of the Pharmacy Course. Text: Robinson's Elementary Law with Blackstone and Walker's Law used as reference study.

##### SECOND SEMESTER.

9. Elementary Law. Three recitations a week. A topical analysis of contracts; negotiable paper; agency; partnership and corporations; guaranty; sale of chattels; right of stoppage in transit; payment; law of tender; liens; interest and usury; contracts of affreightment; bailment; marine, fire and life insurance; probate matters and real estate conveyances. In connection with this outline a brief study is made of South Dakota law having reference to these subjects, the student thus acquiring a general knowledge as well as specific application of same. The student is advised to purchase the Civil Code of South Dakota, or, if he does not desire to do this, a typewritten copy of the sections used will be furnished at actual cost. Text: Townsend's Topical Analysis of Commercial Law.

Following is the scheme of the course of study (for description of subjects not taught in this department and required in the course, see the Preparatory Course):

## COMMERCIAL COURSE.

## FIRST YEAR.

## First Semester—

Composition, a 5.....	English	1
Arithmetic, including Metric System.....	Mathematics	1
Commercial Geography, a 5.....	Commercial Science	1
Bookkeeping, b 3.....	Commercial Science	2
Military, 3, or Physical Culture, 2.....		
Elective, 4.....		
Elementary Physiology, a 4, b 1.....	Zoology	1
Latin, a 5.....	Latin	1

## Second Semester—

Composition, a 5.....	English	2
Algebra, a 5.....	Mathematics	2
Civics, a 5.....	History	2
Bookkeeping, b 3.....	Commercial Science	3
Military, 3, or Physical Culture, 2.....		
Elective, 3.....		
Physiography, a 3.....	Physiography	1
Latin, a 3.....	Latin	2

## SECOND YEAR.

## First Semester—

Composition and Rhetoric, a 5.....	English	3
Algebra, a 5.....	Mathematics	3
Shorthand, a 5.....	Commercial Science	4
Typewriting, 5.....	Commercial Science	5
Military, 3, or Physical Culture, 2.....		
Elective, 5.....		
Latin, a 5 or.....	Latin	3
Elementary Biology, a 3, b 2.....	Entomology	1

## Second Semester—

Composition and Rhetoric, a 5.....	English	4
Algebra, a 5.....	Mathematics	4
Shorthand, a 5.....	Commercial Science	6
Typewriting, 5.....	Commercial Science	7
Military, 3, or Physical Culture, 2.....		
Elective, 5.....		
Latin, a 5, or.....	Latin	4
Elementary Biology, a 2, b 3.....	Entomology	2

## THIRD YEAR.

## First Semester—

Composition and Literature, a 5.....	English	5
Plane Geometry, a 4.....	Mathematics	5

---

Elementary Physics, a 3, b 2.....	Physics	1
Elementary Law, a 3.....	Commercial Science	8
Library Course, a 1.....	Library	1
Military, 3, or Physical Culture, 2.....		

Second Semester—

Composition and Literature, a 5.....	English	6
Plane Geometry, a 4.....	Mathematics	6
Elementary Physics, a 3, b 2.....	Physics	2
Elementary Law, a 3.....	Commercial Science	9
Library Course, a 1.....	Library	2
Military, 3, or Physical Culture, 2.....		

---

## School of Agriculture

DR. BRIGHAM, MISS HOOVER.

The School of Agriculture of South Dakota opened in November 1908. During the five months of the first school year more than one hundred students were registered in the pioneer class. The average age of these students was twenty years.

The School of Agriculture has for its specific purpose the instruction and training of young people for the life and work of the farm and home, for the social life of the rural community and for American citizenship.

The farmers' boys and girls are often needed on the farms and in the homes to help the parents during the busy seasons of the year. They can usually be spared from such work during the winter season, and may well spend this time in study which will prepare them for practical, profitable farming and successful home management.

The aim of the instructors in the School of Agriculture is to search out, with the students, the underlying principles of the objects and operations of the farm and household and to teach their application in successful practice.

While the subjects of study consist primarily of those which relate to farming and household economy, they include also such as are essential to a regular high school course. English and mathematics receive due attention. History and civics help to prepare the student for citizenship. Drawing and music are not neglected. Chemistry, physics and biology (including botany,



bacteriology, physiology and entomology) will be studied, especially in their relations to the farm and the home. The instruction is largely technical. The technical topics include studies in soils, plants and crops, domestic animals, food, feeds and feeding, cooking, sewing, laundering, farm and home management, records and accounts, carpentry and blacksmithing. Text-books are used when these aids best answer the purpose. Lectures are given in the subjects which can be most efficiently taught in this way. Free use is made of object lessons. Demonstrations are given in the class rooms, laboratories, kitchen and sewing rooms, barns, greenhouses, gardens, orchards and fields. Laboratory practice is given as far as the facilities permit.

The School of Agriculture welcomes earnest and worthy young men and women from all parts of the state who have passed the eighth grade in the public schools and are willing to work in such a course of mental and manual training as will prepare them for life's labors, on the farms and in the homes of South Dakota.

### THE SCHOOL YEAR.

The season of schooling continues during the colder months of the year. The next term begins November 2, 1909 and continues until Christmas time; the second term opens January 3 and continues until March 31, 1910.

The students of the School of Agriculture, after five months of study and training, will return to their homes for seven months and apply in practice the principles and methods which they have studied.

### COURSES OF STUDY.

Following are the schedules of the courses of study. The academic studies are practically the same for men and women. The courses are differentiated only in such points as are related to their specific spheres in life's work:

---

## Three Years Course for Men

NOTE—The small letters and numbers after the names of subjects indicate the character of the work and the number of times a week, "a," meaning class work, "b," laboratory work.

## FIRST YEAR.

## First Term—

English .....	a 4
Mathematics .....	a 4
Chemistry (Elementary).....	b 2
Biology (Agricultural Botany).....	b 2
Mechanical Drawing.....	b 2
Poultry Culture.....	a 1, b 1
Farm Crops.....	b 2
Live Stock Judging.....	a 2
Dairy Husbandry.....	a 2, b 1
Blacksmithing .....	b 5
Music (vocal).....	5
Military Drill.....	3

## Second Term—

English .....	a 4
Mathematics .....	a 4
Chemistry (Inorganic).....	b 2
Biology (Agricultural Botany).....	b 2
Mechanical Drawing and Building Plans.....	b 2
Poultry Culture .....	a 1, b 1
Farm Crops.....	a 1, b 1
Live Stock Judging.....	a 2
Dairy Husbandry.....	a 2, b 1
Horticulture (Gardening).....	b 1
Agricultural Bacteriology and Sanitation.....	a 1, b 1
Carpentry .....	b 2
Music .....	5
Military Drill.....	3

## SECOND YEAR.

## First Term—

English .....	a 4
Algebra .....	a 4
Farm Accounts and Records.....	a 1
Chemistry (Organic).....	a 3
Biology (Animal Life).....	b 2
Agricultural Physics.....	b 2
Drawing (Free Hand).....	b 2
Soil Formation and Mangement.....	a 1, b 1
Live Stock Judging.....	a 3, b 1
Horticulture (Fruit Growing).....	a 1, b 1
Farm Machinery.....	b 2
Music .....	5
Military Drill.....	3

**Second Term—**

English .....	a 4
Algebra .....	a 4
Farm Accounts and Records.....	a 1
Biology (Human Life).....	a 1
Drawing (Free Hand).....	b 2
Agricultural Physics.....	b 2
Soil Formation and Management.....	a 1, b 1
Breeds of Live Stock.....	a 3
Live Stock Breeding.....	a 2
Horticulture (Fruit Growing).....	a 1, b 1
Farm Machinery.....	b 2
Music .....	5
Military Drill.....	3

**THIRD YEAR.****First Term—**

English .....	a 4
Geometry .....	a 4
<b>Drawing</b> .....	b 2
History and Civics.....	a 4
Land Management.....	a 2
Live Stock Feeding.....	a 4
Dressing and Curing Meats.....	b 1
<b>Forestry</b> .....	a 1
Veterinary Science (Prevention of Animal Diseases).....	a 2
Farm Manufacturing.....	b 2
Music .....	5
Military Drill.....	3
Theme (Selection of Subject and Synopsis).....	1

**Second Term—**

English .....	a 4
Geometry .....	a 4
<b>Drawing</b> .....	b 2
Land Management.....	a 2
Live Stock Feeding.....	a 4
Advanced Live Stock Judging.....	b 2
Agricultural Organization and Co-operation.....	a 1
<b>Forestry</b> .....	a 1
Veterinary Science (Prevention of Animal Diseases).....	a 2
<b>Farm Manufacturing</b> .....	a 1, b 1
Agricultural Storage, Transportation and Marketing.....	a 1
Music .....	5
Military Drill.....	3
Theme (To be presented before March 1).....	3

## Three Years Course for Women

### FIRST YEAR.

#### First Term—

English .....	a 4
Mathematics .....	a 4
Chemistry (Elementary).....	b 2
Biology (Agricultural Botany).....	b 2
Mechanical Drawing.....	b 2
Poultry Culture.....	a 1, b 1
Dairying .....	b 1
Cooking (Elementary) (3 hour b periods).....	a 1, b 2
Sewing (Elementary) (3 hour periods).....	b 2
Music (vocal).....	5
Physical Culture.....	2

#### Second Term—

English .....	a 4
Mathematics .....	a 4
Chemistry (Inorganic).....	b 2
Biology (Agricultural Botany).....	b 2
Mechanical Drawing and Home Architecture.....	b 2
Poultry Culture.....	a 1, b 1
Horticulture (Floriculture and Home Gardening).....	b 1
Cooking and Serving (3 hour periods).....	b 2
Sewing (3 hour periods).....	b 2
Music (vocal).....	5
Physical Culture.....	2

### SECOND YEAR.

#### First Term—

English .....	a 4
Algebra .....	a 4
Household Accounts and Records.....	a 1
Chemistry (Organic).....	a 3
Biology (Animal Life).....	b 2
Household Physics.....	b 2
Drawing (Free Hand).....	b 2
Household Management.....	a 2
Household Science.....	a 1, b 1
Textiles and Sewing.....	a 1, b 2
Music .....	5
Music .....	5
Physical Culture.....	2



**Second Term—**

English .....	a 4
Algebra .....	a 4
Household Accounts and Records.....	a 1
Biology (Human Life).....	a 1
Drawing (Free Hand and Designing).....	b 2
Household Physics.....	b 2
Household Chemistry.....	b 1
Laundrying .....	b 1
Household Science (Marketing, Planning Menus, Serving, Table Decoration).....	a 1, b 1
Dietetics .....	b 1
Sewing (Making Woolen Dresses) (3 hour periods).....	b 1
Tailoring .....	b 2
Clay Modeling, Wood Carving.....	b 1
Physical Culture.....	2

**THIRD YEAR.****First Term—**

English .....	a 4
Geometry .....	a 4
Drawing .....	b 2
History and Civics.....	a 4
Household Sanitation and Plumbing.....	a 2
Household Science.....	a 1, b 1
Dressing and Curing Meats.....	b 1
Home Decoration.....	b 1
Millinery .....	b 1
Clay Modeling and Wood Carving.....	b 1
Physical Culture.....	2
Theme (Selection and Synopsis).....	1

**Second Term—**

English .....	a 4
Geometry .....	a 4
Drawing .....	b 2
Agricultural and Domestic Organization and Co-operation....	a 1
Invalid Cookery (3 hour period).....	b 2
Home Nursing and Emergencies.....	b 2
Care and Feeding of Children.....	a 1
Designing and Making Graduation Dresses.....	b 2
Leather Tooling.....	b 1
Music .....	5
Physical Culture.....	2
Theme (To be presented before March 1).....	1

---

## SHORT INDUSTRIAL COURSES

Special work is offered in the various industrial departments for the benefit of those who can not avail themselves of the opportunities offered in the longer courses. These short courses are becoming a very attractive and profitable feature in the lives of many who can get away from their homes only at the time of the year when the work is offered, and persons of all ages, young and old, are found working side by side in these classes, to improve the conditions of their lives in the home and on the farm. A special effort is put forth to make the work interesting and specialists from other institutions are often engaged to assist in the instruction.

Since much of this work is adapted to the needs of the persons enrolled for it, the courses cannot be very fully described here. For a more detailed description of any particular work, address inquiries to the department concerned or to the President of the College.

The different courses are mentioned below :

---

### The Two Weeks Course in Agriculture

January 3 to January 14

This course will consist of lectures on judging live stock, stock breeding, stock feeding, corn judging, grading and cleaning grain, poultry management and kindred subjects.

---

### The Two Weeks Dairy Course

January 3 to January 14

This course is offered to meet the demands of those experienced creamery and cheese factory operators who cannot spare the time to take a more extended dairy course. The rapid progress and profitable application of scientific principles to the dairy industry make it important that every cheese and buttermaker take at least a short course in dairying.

The chief factors influencing the successful operation of factories will be considered in this course, such as the best methods of handling hand-separator cream; the control of over-run; the preparation and use of starters; the testing of milk and cream for fat and adulteration; the management of creameries and cheese factories.

Special instructors and lecturers will be employed during the course.

The work is as follows:

Fourteen lectures on buttermaking and creamery management.

Seven lectures on dairy machinery, boilers and engines.

Seven lectures on dairy business methods.

---

## **The Three Months Creamery Course**

**February 7 to April 29**

This course is especially designed for young men wishing to fit themselves for various positions connected with the creamery industry such as helpers, buttermakers, managers, inspectors, etc.

Prospective students are urged to get at least six months of practical experience in some creamery before attending college, as by this means it is found that much greater benefit is derived from the work taught at the school.

The more general application of scientific principles to the manufacturing industries as well as the increasing competition on all sides demand a more thorough training in scientific and business methods than heretofore. This is no less true with regard to the creamery industry, and while the practical work of the school is by no means neglected special pains are taken to teach the underlying principles and the "reason why" for many of our daily operations.

The increasing interest in dairying in South Dakota and the consequent multiplication of creameries are creating a demand for men well trained along dairy lines, and applications for such are constantly being received at salaries varying from \$50 to \$125 per month. Worthy students may count on the co-operation of the dairy department in helping them to secure positions at the close of their college work.

The course of study covers the months of February, March and April and takes up the following subjects:

Factory buttermaking and creamery management.

Testing milk and its products.

Dairy bacteriology.

Dairy arithmetic and bookkeeping.

Breeding, feeding and management of dairy cattle.

Agronomy.

Veterinary Medicine.

Creamery Mechanics.

A certificate of standing will be issued to all students passing satisfactory examinations on the above subjects.

A diploma will also be issued to students holding certificates of standing after satisfactorily demonstrating their ability to successfully operate a creamery for one year.

---

## **Short Course in Steam Engineering**

**January 3 to June 15**

Modern agricultural methods have introduced in such a marked degree the steam engine as a substitute for animal power that the consequent growing demand for steam engineers has led the College to arrange a two-term course of study for the special training of steam (especially traction) engineers. Extreme care has been taken only to offer such work as shall prove valuable to the man running the traction engine, or other machinery. A relatively large amount of shop work, engine repairing and engine running is introduced, with a proper proportion of recitations in closely allied subjects. Upon the satisfactory completion of this work the student is given a certificate which is virtually the same as a license in this state to run an engine.

Students who desire to take this course are expected to pass satisfactory examinations in arithmetic as far as the preparatory class carries that subject in the fall. Also to read intelligently and show such general elementary training as shall indicate that they are able to understand the subjects embraced in the engineering course.



The winter term begins January 3, and the spring term March 29. The work is as follows:

#### WINTER TERM.

Arithmetic .....	a	5
Physics of Steam.....	a	5
Civil Government.....	a	5
Forging .....	b	3
Mechanical Drawing.....	b	2

#### SPRING TERM.

Algebra .....	a	5
Steam Engine Lectures.....	a	5
Elementary Physics.....	a	5
Forging .....	b	2
Mechanical Drawing.....	b	3
Engine Practice.....	b	5

---

## Student Organizations

---

#### INDUSTRIAL COLLEGIAN.

Mary Wright.....	Editor-in-Chief
Clifford Johnson.....	Business Manager

#### ATHLETIC ASSOCIATION.

John Furnstahl.....	President
Frank Sperb.....	Secretary
Percy Huntimer.....	Treasurer
Chas. Coughlin.....	President State Inter-Collegiate Athletic Assn.

#### BOARD OF CONTROL OF ORATORY AND DEBATING.

Roy Clarke.....	President
Howard Biggar.....	Secretary

#### BAND.

Francis J. Haynes.....	Leader
------------------------	--------

#### YOUNG MEN'S CHRISTIAN ASSOCIATION.

George C. Phillips.....	President
Henry Erdmann.....	Secretary

#### YOUNG WOMEN'S CHRISTIAN ASSOCIATION.

Amy Ladd.....	President
Hazel Grinols.....	Secretary

## ATHENIAN LITERARY SOCIETY.

T. B. Kelly.....	President
Ellen Palm.....	Secretary

## MILTONIAN LITERARY SOCIETY.

Ada Erwin.....	President
Harvey Jensen.....	Secretary

## FRANKLIN LITERARY SOCIETY.

Ray Wheaton.....	President
Bessie Ladd.....	Secretary

## ART CLUB.

Edna Bushnell.....	President
Orland White.....	Secretary

## CIVIL ENGINEERING CLUB.

Ralph McKeown.....	President
Charles Johnson.....	Secretary

## LADIES' GLEE CLUB.

Francis J. Haynes.....	Conductor
------------------------	-----------

## COLLEGE GLEE CLUB.

Francis J. Haynes.....	Conductor
------------------------	-----------

## AGRICULTURAL CLUB.

Andrew Palm.....	President
Henry Erdmann.....	Secretary

## ELECTRICAL ENGINEERING CLUB.

Chester Matheny.....	President
Charles Coughlin.....	Secretary

---

**Battalion Roster**


---

## FIELD AND STAFF.

Major.....	
Adjutant.....	John H. Balmat
Quartermaster.....	Clifford D. Johnson

## NON-COMMISSIONED STAFF.

Sergeant Major.....	Clayton Pence
Quartermaster Sergeant.....	Cecil Starring

## COMPANY "A."

Captain.....	Fred Matheny
1st Lieutenant.....	Ervin Buck
2nd Lieutenant.....	L. Cooledge
1st Sergeant.....	Morris Jerlow
Q. M. Sergeant.....	Henry Erdmann
Sergeant.....	Orville McMillan
Sergeant.....	James Dickey
Sergeant.....	Roy Soule
Sergeant.....	L. Mathewson
Corporal.....	Leonard Dye
Corporal.....	Richard Morton
Corporal.....	Bert Shepard
Corporal.....	Henry Shea
Corporal.....	Edwin Dye
Musician.....	Norman Burgess
Musician.....	LeRoy Crosby

## COMPANY "B."

Captain.....	J. Ray Fridley
1st Lieutenant.....	R. C. Fridley
2nd Lieutenant.....	Geo. Ulrich
1st Sergeant.....	Henry Odland
Q. M. Sergeant.....	Ervin Mathews
Sergeant.....	Ole Odland
Sergeant.....	Ross Troop
Sergeant.....	R. V. Fitzgerald
Sergeant.....	Ben Durland
Corporal.....	Vance Crane
Corporal.....	Paul Granger
Corporal.....	Scott Soule
Musician.....	Arthur Bacon
Musician.....	Harry Mitchell

# COLLEGE ALUMNI

## ALUMNI ASSOCIATION.

B. T. Whitehead, '97.....	President
Nora Updyke Bacon, '91.....	First Vice President
Guy W. Roe, '90.....	Second Vice President
Hallie Hyde, '08.....	Third Vice President
Hubert B. Mathews, '92.....	Secretary and Treasurer

---

## Graduates

### CLASS OF 1886.

#### BACHELOR OF SCIENCE.

Saylor, Marcus A., Prof. of Mining & Irrigation Eng., New Mexico  
School of Mines, Socorro.

### CLASS OF 1888.

#### BACHELOR OF SCIENCE.

Aldrich, John M.....Prof. Biology, U. of Idaho, Moscow, Idaho.  
Hewes, Lulah, (Wellman).....Mayville, N. Y.  
Lawrence, Phillip A.....Attorney, Fargo, N. D.

### CLASS OF 1889.

#### BACHELOR OF SCIENCE.

\*Aldrich, Ellen (Roe).....Died Dec. 8th, 1897, at Helena, Mont.  
\*Allen, William C.....  
Arnold, Katie (Boswell).....Estelline.  
Brooke, Grace (Lawshe).....Valley City, N. D.  
Crane, May (Cranston).....Spokane, Wash.  
Cross, Alvah G.....  
Cunningham, Sarah (Haber).....Spokane, Wash.  
Eno, Durrell G.....Farmer, Platte.  
Grady, Francis A.....Attorney, Red Lake Falls, Minn.  
Korstad, Hans.....Farmer, Brookings.  
Larson, Lars K.....Bank Cashier, Dell Rapids.  
McKenney, Dustin W., C. M. Schwab Manual Training School, Home-  
stead, Pa.  
McLouth, Lewis C.....Manufacturer, Detroit, Mich.  
Mork, Albert A.....Farmer, Des Lacs, N. D.  
Orcutt, Carrie (Ross).....Northfield, Minn.  
Rogers, Edmund.....Machinist, Milwaukee, Wis.  
Ross, Abbie E.....Arlington.

---

\*Deceased.



## CLASS OF 1890.

## BACHELOR OF SCIENCE.

Day, John M.....	Teacher, Mellette.
Egeberg, Hildus.....	Farmer, Brookings.
Haasarud, Ole H.....	Farmer, Bratsburg, Minn.
Harkins, Lilla A., Prof. of Dom. Science, Montana Agricultural College, Bozeman.	
Hopkins, Cyril G., Prof. of Agronomy, Chemist, and Vice Director of U. S. Experiment Station, U. of Illinois, Champaign.	
Irish, Maggie (Duffey).....	St. Louis, Mo.
Jenkins, John C.....	Attorney, Portland, Oregon.
Kenyon, Arthur H.....	Lawyer, Spokane, Wash.
Pyne, Estel W.....	Los Angeles, Cal.
Roe, Guy W.....	Sup't. Union Fibre Co., Winona, Minn.
Stoner, Minnie A., Prof. of Domestic Science, University of Wyoming, Laramie.	
Wardall, Norman M.....	Seattle, Wash.

## CLASS OF 1891.

## MASTER OF SCIENCE.

Aldrich, John M.....	Prof. Entom., U. of Idaho, Moscow, Idaho.
----------------------	---

## CLASS OF 1891.

## BACHELOR OF SCIENCE.

Aldrich, Irwin D....	Editor and Sec. Regents of Education, Big Stone.
Bacon, Nora (Updyke).....	Pueblo, Col.
Bell, William D.....	Editor, St. James, Minn.
Bentley, Wm. S.....	Physician Soldiers' Home, Hot Springs.
Crane, Austin B.....	Civil Eng., Spokane, Wash.
Davis, Homer.....	Physician, Genoa, Neb.
Dillon, Willis C.....	Attorney, Omaha, Neb.
Dibble, Hettie (Doughty).....	Clark.
Fourt, Fanny (Shannon).....	Fairfield, Ia.
Haberlein, Alice (Robinson).....	Aguas Calientes, Mex.
Hann, Jay B.....	Photographer, Bellingham, Wash.
Houston, Grant.....	Physician, Joliet, Ill.
Irish, Henry C.....	Supt. Botanical Gardens, St. Louis, Mo.
Lewis, Perry.....	Tinner, Mankato, Minn.
Millett, Mary (Frick).....	Rochester, Minn.
Solberg, Halvor C.....	Prof. Steam and Mechanical Eng., S. D. S. C.
Spooner, Jennie (Chamberlain).....	Physician, Shepard, Mich.
Valleau, Vinal B.....	Groton
West, Hugh H.....	Physician, Elgin, Ill.
Wolgemuth, Lee F.....	Mechanical Engineer, Hamilton, Mont.

## CLASS OF 1892.

## BACHELOR OF SCIENCE.

Aiken, Margaret (Madden).....	Brookings.
Austin, Steven E.....	Machinist, Iowa.
Davis Samuel H.....	Beaverton, Ore.
Griffiths, David.....	Ass't. Agrostologist, Agr. Dep't., Wash.
Hamlin, John R., Jr.....	Los Angeles, Cal.

Harding, Albert S.....Prof. of History & Political Science, S. D. S. C.  
 Hatfield, Ira H.....Attorney, Lincoln, Neb.  
 Keeney, Emma H.....Silver Lake, Ore.  
 Mathews, Eva (Plocker).....Brookings.  
 Mathews, Hubert B.....Prof. of Physics & Elec. Eng., S. D. S. C.  
 McAndrew, James E.....Farmer, Iroquois.  
 \*McLouth, Ida B.....Died, Aug. 27, 1899, at Short Beach, Conn.  
 Schlosser, Thomas F.....Clergyman, Almira, Wash.  
 Torrence, Nettie (Sloan).....Redlands, Cal.  
 Whitten, John C.....Prof. of Hort., U. of Missouri, Columbia.  
 Williams, Effie (Snell).....Florist, Memphis, Neb.  
 Winegar, Albert J.....Harvey, Ill.

## CLASS OF 1893.

## MASTER OF SCIENCE.

Griffiths, David, Ass't Agrostologist, Dep't of Agriculture, Washington,  
 D. C.

## BACHELOR OF SCIENCE.

Bates, Edmund T.....Farmer, Onslow, Ia.  
 Beck, Milton.....Chief Engineer, Alamo Mfg Co., Hillsdale, Mich.  
 Edgerton, Wm. M.....Physician, Faulkton.  
 McLouth, Benjamin F.....Los Angeles, Cal.  
 Robertson, Ada N.....Teacher, East Helena, Mont.  
 Robertson, Clarence H., Science Teacher and Missionary, Tient Tsin,  
 China.

## CLASS OF 1894.

## MASTER OF SCIENCE.

Mathews, Eva (Plocker).....Brookings.  
 Wolgemuth, Lee F.....Mechanical Engineer, Hamilton, Mont.

## BACHELOR OF SCIENCE.

Brown, Cyrus O.....Attorney, Burwell, Neb.  
 Brown, James A.....Attorney, Lincoln, Neb.  
 Hopkins, Mrs. C. G.....Champaign, Ill.  
 Knox, Elinor (Williams).....Fresno, Cal.  
 Luke, Fred K.....Farmer, Kalispell, Mont.  
 Spooner, Fannie (Parker).....Fort Shaw, Mont.  
 Sproul, Alex H., Head of Com'l. Dep't., Shortridge High School,  
 Indianapolis, Ind.  
 Tanzy, Hattie (Dibble).....Canton.  
 \*Tanzy, Marvin F.....Died Feb. 8, 1900, at Canton, S. D.  
 Waters, Geo. D.....Traveling Salesman, Madison.  
 Young, Gilbert A., Ass't. Prof. of Mech. Eng., Purdue Univ., Lafayette,  
 Ind.

## CLASS OF 1895.

## MASTER OF SCIENCE.

McKenney, Dustin W., Principal C. M. Schwab Manual Training School,  
 Homestead, Pa.  
 Schoppe, W. J. A., Observer, United States Weather Bureau, Iola, Kan.  
 Sproul, Alex H., Head of Com'l. Dep't., Shortridge High School,  
 Indianapolis, Ind.

## BACHELOR OF SCIENCE.

Brown, Sara.....	Teacher, Sherman City, Ia.
Cornell, Harry M.....	Cashier, Russell, N. D.
Merrick, Mable (Mayland).....	Severance, Kan.
Moore, Anna (Parker).....	Brookings.
Robertson, Edith (Salisbury).....	Tient Tsin, China.
Sevy, Isaac B.....	Clergyman, Tyndall.
Sproul, Wm. T., Sec. & Treas., Ingersoll Milling Machine Co., Rockford, Ill.	
Thornber, John J.....	Prof. of Botany, U. of Arizona, Tucson.
Wilcox, Ernest N.....	Farmer, Thawville, Ill.

## PHARMACY GRADUATES.

Briggs, Elmer E.....	Farmer, Muscoda, Wis.
Knox, Wm. H.....	Orange Grower, Fresno, Cal.
Lentz, Elmer A.....	Dentist, Brookings.
*Murphy, Wm.....	
Whitehead, B. T.....	Prof. Pharmacy, S. D. S. C.

## CLASS OF 1896.

## MASTER OF SCIENCE.

Brown, James A.....	Attorney, Lincoln, Neb.
Luke, Fred K.....	Farmer, Kalispell, Mont.
Robertson, Ada N.....	Teacher, East Helena, Mont.
Williams, Effie (Snell).....	Florist, Memphis, Neb.
Wilcox, Ernest N.....	Farmer, Thawville, Ill.

## BACHELOR OF SCIENCE.

Allison, Wm. F., Prof. Civil Eng., Colorado School of Mines, Golden, Col.	
Atkinson, Jesse C.....	Civil Engineer, Chicago, Ill.
Brown, Ida (Dibble).....	Lincoln, Neb.
Carter, Louis W.....	Farmer, Highmore.
Downing, Jennie C.....	Rathdrum, Idaho.
Grattan, Paul H.....	Jackson, Minn.
Hegeman, Harry A.....	First Lieutenant 19th Infantry, U. S. A.
Holm, Andrew B.....	Photographer, Brookings.
Hoy, Nora (Mathews).....	Brookings.
Hoy, Howard H.....	Ass't. in Phys. and El. Eng., S. D. S. C.
Korstad, Mary.....	Missionary, Brookings.
Lusk, Willard C.....	Editor, Yankton.
Sasse, Ernest G.....	Physician, Bridger, Mont.
Smith, Alta (Mathews).....	Indian Springs, Nev.
Williamson, Albert.....	Editor, Kennebec.

## PHARMACY GRADUATES.

Cotter, J. C.....	Farmer, Dell Rapids.
Grove, Eugene.....	Physician, Hetland.
Moore, Thomas.....	Druggist, Waterloo, Ia.
Palmer, Horton.....	Druggist, White.
Sherwin, Frank.....	McMinville, Ore.

## CLASS OF 1897.

## MASTER OF SCIENCE.

Davis, Homer.....	Physician, Genoa, Neb.
-------------------	------------------------

## BACHELOR OF SCIENCE.

Ainsworth, Cephas B.....	Deputy Treasurer, Aberdeen.
Atkinson, Geo.....	Weyburn, Canada.
Atkinson, Walter.....	Park Ridge, Ill.
Boyden, Frank E.....	Physician and Surgeon, Brookings.
Bullen, Grace (Young).....	Brookings.
Clevenger, John W.....	Dentist, Chamberlain.
Crowley, Cassie (Madden).....	Fargo, N. D.
Harding, Neva (Whaley).....	Brookings.
Hazel, Wm. A.....	Real Estate, Aberdeen.
*Husted, Harley H.....	Died 1907, at Lincoln, Neb.
Jolley, Wm. G.....	Principal of Schools, Castlewood.
Olson, Eva.....	Preceptress, Grand Forks, N. D.
Parsons, Thomas S.....	Science Teacher, Durango, Col.
Rensburg, Alice (Wilcox).....	Thawville, Ill.
Roe, Robert.....	Stockman, Highmore.
Saylor, Christie (Hargis).....	Elmo, Mo.
Sevy, Orpha (West).....	Tyndall
Shuster, John W.....	Ass't. Prof. Elec. Eng., U. of Wisconsin, Madison.
Thornber, Walter S.....	Prof. Hort., State College, Pullman, Wash.
Walters, Wm. H.....	Grain Buyer, Bruce.
Whitehead, Bower T.....	Prof. of Pharmacy, S. D. S. C.
Work, Lloyd E.....	

## CLASS OF 1898.

## MASTER OF SCIENCE.

Harkins, Lilla A., Prof. Domestic Science, Montana Agr. College, Bozeman, Mont.	
Parsons, Thomas S.....	Science Teacher, Durango, Col.

## BACHELOR OF SCIENCE.

Adams, Edith (Riemann).....	Antwerp, Belgium.
Ainsworth, Howard.....	Street Car Con., Los Angeles, Cal.
Allison, Mabel (Hegeman).....	Golden, Col.
Beck, Louis, Gasoline Expert, Fairbanks Morse Co.,	Beloit, Wis.
Bolles, Myrick N.....	Mining Engineer, Orient, S. D.
Boyden, Maude (Hegeman).....	Brookings.
Crane, Elsie (Curtiss).....	Pullman, Wash.
Crane, Margaret (Davidson).....	Spokane, Wash.
Fjerstad, Hans C.....	Grocer, Sioux Falls.
Harding, Charles J.....	Teacher, Brookings.
Hazel, Flora (Ainsworth).....	Aberdeen.
Hodgeson, Herbert H.....	U. S. Geol. Survey, Wash., D. C.
Knox, Wm. H.....	Orange Grower, Fresno, Cal.
Lawrence, Claude W., Inst'r in Agronomy and Cereal	ist of the Experiment Station, State College, Pullman, Wash.
Lawrence, Clay.....	Lawyer, Seattle, Wash.
Paddock, Jay M.....	Farmer, Lake Preston.
Thornber, Wm. T.....	Farmer, Dell Rapids.
Towne, Addie (Loveland).....	Minneapolis, Minn.
Towne, Judson R.....	Teacher, Minneapolis, Minn.
White, Alice (Barton).....	Brookings.

## PHARMACY GRADUATES.

Beebe, Jay L.....	Physician, Anaheim, Cal.
-------------------	--------------------------



---

Clevenger, J. W.....	Dentist, Chamberlain.
Holsey, Joseph.....	Druggist, Veblen.
Lee, Berton.....	Colorado Springs, Col.

## CLASS OF 1899.

## MASTER OF SCIENCE.

Mathews, Hubert B.....	Prof. of Phys. and El. Eng., S. D. S. C.
Tanzy, Hattie (Dibble).....	Canton.
Thornber, Walter S....	Prof. of Hort., Washington Ag'l College, Pullman.
Whitten, John C....	Professor of Horticulture, U of Missouri, Columbia.

## BACHELOR OF SCIENCE.

Findeis, Phillip.....	Lumber Merchant, Miranda.
Lawrence, Mary M.....	Teacher, Exa, Wash.
Lawrence, Wm. H., In.	in Botany and Ass't Botanist in Ex. Station, State College, Pullman, Wash.
Mason, Nellie (Mason).....	Albia, Ia.
Nachtigal, Isaac.....	County Sup't, Parker.
Nelson, Ina (Colegrove).....	Urbana, Ill.
Walters, Edith.....	Merchant, Bruce.
West, George.....	Physician, Marengo, Ia.

## PHARMACY GRADUATES.

Carr, George.....	Bison.
Crowley, D. C.....	Insurance Agent, Fargo, N. D.
Hepner, Frank.....	Ass't Chemist U. of Wyoming, Laramie.
Kendall, Clint D.....	Druggist, Brookings.
Lindsey, Charles.....	Winfred.
Oulton, Frank.....	Real Estate, Faulkton.
Shriver, E. M.....	Druggist, Elkton.
Taylor, C. DeWitt.....	Drug Clerk, Denver, Col.

## CLASS OF 1900.

## BACHELOR OF SCIENCE.

Allen, Hart M.....	Druggist, Oakland, Cal.
*Anderson, Clark W.....	Died, March 6th, 1902, at Brookings.
Beebe, Jay L.....	Physician, Anaheim, Cal.
Carlson, Esther.....	Teacher, St. Paul, Minn.
Davies, Mary, Inst.	History and Literature, Falls City High School, Falls City, Neb.
DeLa, John W.....	Editor, Balfour, N. D.
Doughty, Mathew W.....	Civil Engineer, Scranton, Pa.
Grove, Frank W.....	Dentist, Wausa, Neb.
Harza, Carl.....	Electrician, Detroit, Mich.
Hodgeson, Gustava (Olson).....	Washington, D. C.
Howard, Ella (Carlson).....	Lake Preston.
Kendall, Clinton D.....	Druggist, Brookings.
Lawrence, Jessie.....	Inst. in High School, Snohomish, Wash.
Mathews, Alice M.....	Great Falls, Mont.
Mathews, Roscoe A., Civil Engineer,	Geological Survey, Great Falls, Mont.
Morrison, Freda C.....	Vermillion.
Olson, Callie (Williams).....	Brookings.
Sherwin, Sara (Davies).....	New York, N. Y.

## PHARMACY GRADUATES.

Bentley, Wm. S.....	Physician Soldiers' Home, Hot Springs.
Brosseau, Jesse E.....	Physician, Chicago, Ill.
Baldwin, Corwin B.....	Drug Clerk, Rapid City.
Connell, John C.....	Druggist, Luverne.
Else, Earl.....	Palouse, Wash.
*Eckert, Henry.....	
George, William.....	Physician, Evarts.
Hart, Bertrand.....	Physician, Blunt.
Jones, Robert.....	Druggist, Madison.
West, Hugh H.....	Physician, Elgin, Ill.

## CLASS OF 1901.

## MASTER OF SCIENCE.

Knox, Wm. H.....	Orange Grower, Fresno, Cal.
Whitehead, Bower T.....	Professor of Pharmacy, S. D. S. C.

## BACHELOR OF SCIENCE.

Bagley, Susie.....	Wolsey.
Bolles, Laura Jane.....	Orient.
Boyd, Mary.....	Teacher, Brookings.
Brosseau, Jesse E.....	Medical Student, Chicago, Ill.
Culhane, Michael E.....	Lawyer, Brookings.
Culhane, Lillian (Langdon).....	Brookings.
Davies, Autumn.....	Omaha, Neb.
Dodge, Fred E.....	Hotel Keeper, Redfield.
Else, Earl.....	Palouse, Wash.
Enos, Winifred.....	Teacher, Brookings.
Erickson, Martin L.....	Washington, D. C.
Fishback, Myra.....	Brookings.
Harza, LeRoy F.....	Student Civil Eng., Madison, Wis.
Kendall, Leonard J.....	Telegraph Operator, Brookings.
Kennedy, C. LeRoy.....	Mountain View, Col.
Lee, Rhoda (Johnson).....	Colorado Springs, Col.
McElmurry, Loretta.....	Teacher, Brookings.
Mork, Theodore.....	Farmer, Des Lacs, N. D.
Phillips, Florence.....	Teacher, Arlington.
Phillips, C. Louise.....	Assistant Librarian, S. D. S. C.
Roskie, Geo. W.....	Abstractor, Brookings.
Roskie, Lina (Evans).....	Brookings.
Hatton, John Henry.....	Division of Forestry, Dept. of Ag., Washington.

## PHARMACY GRADUATES.

Cornell, Edward.....	Drug Clerk, Huron.
Tidball, Clyde.....	Drug Clerk, Brookings.

## CLASS OF 1902.

## BACHELOR OF SCIENCE.

Cuckow, Edith (Thornber).....	Elkton.
Fleming, Michael.....	Coal Co., St. Paul, Minn.
George, William A.....	Physician, Evarts.
Hart, Bertrand M.....	Physician, Blunt.
Hepner, Frank E., Ass't Station Chemist, Univ. of Wyoming, Laramie.	
Johnson, Clara (Johnson).....	Pierre.

---

*Johnson, Edward.....	
Kephart, George.....	Teacher, Beresford.
Lee, Berton E.....	Colorado Springs, Col.
Ramsey, Henry J.....	Ass't in Plant Pathology, Whittier, Cal.
Trooien, Ole N.....	Dayton, Ohio.
Winegar, Laura.....	Brookings.

#### PHARMACY GRADUATES.

Allison, Wm. F., Prof. of Civil Eng., Colorado School of Mines, Golden, Col.	
Boyden, Frank E.....	Physician and Surgeon, Brookings.
Christianson, Bernett C.....	Druggist, Volga.
Hayter, McPherson.....	Druggist, Artesian
Jarrett, Arthur A.....	Druggist, Colman.
Jarvis, Hall S.....	Druggist, Faulkton.
Leighty, James A.....	Druggist, Winfred.
Morton, Frederic M.....	Drug Clerk, Sisseton.
Pickles, Chester E.....	Northville.
Schnaidt, Henry.....	Druggist, Parkston.
Schroeder, Anna C.....	Clerk, Ramona.
Thomas, John C.....	Drug Clerk, Marion.

#### CLASS OF 1903.

##### MASTER OF SCIENCE.

Crane, Austin B.....	Civil Engineer, Spokane, Wash.
Hoy, Howard H.....	Inst. in Phy. and El. Eng., S. D. S. C.

##### BACHELOR OF SCIENCE.

*Almond, Fred C.....	Died, 1909, at Clear Lake.
Cole, John S.....	Washington, D. C.
Cuckow, Fred W.....	Lawyer, Elkton.
Drew, Letta (Colegrove).....	Davenport, Ia.
Hubbart, Minnie E.....	Teacher, Willow City, N. D.
Johnson, Isaac.....	Pierre.
Kendall, M. Krete.....	Brookings.
Langdon, Alice.....	Teacher, Parker.
Miller, Shirley P.....	Berlin, Germany.
Norton, Frank A.....	National Canning Co., Aspinwall, Pa.
Otterness, Jens M.....	Brookings.
Peirce, E. Esther.....	Brookings.
Sanborn, Ethel I.....	Ely, Minn.
Sarvis, Roscoe J.....	Summit
Seide, Louise W. M.....	Teacher, Milbank.
Webster, James L.....	Minister, Morris, Ill.
Westcott, Geo. R.....	Madison, Wis.
*Young, Mary (Cranston).....	Died 1907, Oakes, N. D.

#### PHARMACY GRADUATES.

Drew, Arthur W.....	Druggist, Davenport, N. D.
Hall, Roy J.....	Druggist, Oldham.
Heston, Edward C.....	Medical Student, Chicago.
Hollister, Arthur R.....	Druggist, Erwin.
Howell, John E.....	Chemist S. P. R. R., Houston, Tex.
Johnston, Samuel.....	Druggist, Hazel.
Norton, Frank A.....	Chemist, National Canning Co., Aspinwall, Pa.

Steiner, Frederick W.....	Medical Student, Baltimore, Md.
Trumm, Robert E.....	Druggist, Hayti.
Van Dusen, Fred J.....	Drug Clerk, Spearfish.
Williams, Percy.....	Student, Chicago, Ill.
Young, Alfred J.....	Druggist, Oakes, N. D.

## CLASS OF 1904.

## MASTER OF SCIENCE.

Ole N. Troovien.....	Dayton, Ohio.
----------------------	---------------

## BACHELOR OF SCIENCE.

Binford, Wm. W., Inst. in Manual Training, Public Schools, Denver, Col.	
Kelton, Maude (Bushnell).....	Dallas, Ore.
Loucks, Anna Y.....	Brookings.
Mattice, Albert F.....	Student Johns Hopkins, Baltimore, Md.
McGarry, Lawrence R.....	Bank Cashier, Mansfield.
Ruth, Thomas H.....	Veterinary Surgeon, De Smet.
Sanderson, Everett G.....	Chemming, Col.
Sherwin, Ralph L.....	Civil Engineer, Scranton, Pa.
Smith, Wm. H.....	Clergyman, Huron.
Thompson, Clarence.....	Farmer, Dell Rapids.
Walter, L. Erving.....	Manila, P. I.

## PHARMACY GRADUATES.

Anderson, Ernest.....	Drug Clerk, South Shore.
Dillon, Cornelius.....	Drug Clerk, Walla Walla, Wash.
Frick, Harry E.....	Drug Clerk, Wessington Springs.
Goodale, Alton R.....	Drug Clerk, Aberdeen.
Hooker, Henry.....	Medical Student, Chicago, Ill.
Koch, Arthur E.....	Assistant in Chemistry, Brookings.
Ramsdell, Leonard C.....	Druggist, Beresford.
Thompson, Godfrey.....	Dell Rapids.
Weisflock, Theodore.....	Drug Clerk, Redfield.

## CLASS OF 1905.

## MASTER OF SCIENCE.

Hepner, Frank E., Ass't Station Chemist, U. of Wyoming, Laramie, Wy.	
Norton, Frank A., Chemist for National Canning Co., Aspinwall, Pa.	
Phillips, C. Louise.....	Ass't Librarian, S. D. S. C.
Thompson, Clarence.....	Farmer, Dell Rapids.
Walter, L. Erving.....	Manila, P. I.

## BACHELOR OF SCIENCE.

Boyden, Guy L.....	Student of Medicine, Chicago, Ill.
Chappell, Bessie.....	Teacher, Elkton.
Davis, Clifford W.....	Special Agent for Dept. of Agriculture, Highmore.
Elliott, Roy K.....	Electrician, West Lynn, Mass.
Fishback, Van Dusen.....	Bank Clerk, Brookings.
Forrest, Victor E.....	Civil Engineer, Yankton.
Fulkerson, Vincent.....	Plant Breeder, Yankton.
Grove, Mary I.....	Registrar, S. D. S. C.
Hage, Christian F.....	Student, S. D. S. C.
Howg, Edwin M.....	Physician, St. Paul, Minn.
Jensen, Lewis N.....	Law, Vermillion.



---

Johnson, Carl L.....	Electrician, Schenectady, N. Y.
Loucks, Della M. (Fassett) .....	Watertown.
Mathews, Harry E.....	Las Vegas, Nevada.
Miller, Ralph L.....	Lumberman, Carrington, N. D.
Murphy, Matt W.....	Law Student, State University, Vermillion.
Nelson, John Harland.....	Urbana, Ill.
Ronning, Oscar E.....	Prin. of Schools, Peever.
Schaphorst, Wm. F., Ass't Prof. Mechanical Eng., State Ag. College, Mesilla Park, N. M.	
Seeger, Adolph M.....	Marietta, Minn.
Slocum, Ina S.....	Vancouver, B. C.
Thogerson, Arthur A.....	Yankton.
Walters, Daisy.....	Bruce.
Williams, Harry.....	Bank Clerk, Brookings.
Williams, Percy.....	Student, Chicago, Ill.
Wilson, Elsie (Chappell).....	Brookings.

#### PHARMACY GRADUATES.

Fjerstad, Carl.....	Druggist, Elkton.
Howg, Edwin M.....	Physician, St. Paul, Minn.
Larson, Lars P.....	Drug Clerk, Howard.
Mathews, Harry E.....	Forester, Las Vegas, Nev.
McCurdy, Walter.....	Druggist, Lane.
Morton, Grant J., Assistant in Chemistry, State Agricultural College, Fargo, N. D.	
Pottinger, Geo.....	Drug Clerk, Dell Rapids.
Thompson, Clarence.....	Farmer, Dell Rapids.
Volin, Porter.....	Volln.

#### CLASS OF 1906.

#### BACHELOR OF SCIENCE.

Aldrich, G. Malcolm.....	County Sup't., Brookings.
Barrett, J. Wylie.....	Elec. Eng., Mitchell.
Bonesteel, Bee M.....	Teacher, Brookings.
Burghardt, Roy D.....	Electrician, Seattle, Wash.
Carpenter, Abbie J.....	Raymond.
Chilcott, Ellery F., Special Agent Dep't. of Agriculture, Edgerton, N. D.	
Coller, Fred A.....	Student, Harvard University.
Davies, Gladys.....	Drug Clerk, Letcher.
Erstad, Alfred J.....	Electrician, Redding, Cal.
Evans, Edna V.....	Brookings.
Kennard, Frank L., Special Agent, Dep't. of Agriculture, Delhart, Tex.	
Knox, Arthur H.....	Alpena.
Koch, Arthur E.....	Ass't. in Chemistry, S. D. S. C.
Moffatt, Margaret E.....	Teacher, Brookings.
Reich, Rose M.....	Tunnel City, Wis.
Thornber, Jessie B.....	Tuscon, Ariz.
Wellington, Ellen (Brownwell).....	Interior.
Youngberg, Guy E.....	Student, S. D. S. C.

#### PHARMACY GRADUATES.

Allison, Harold.....	Student, Chicago, Ill.
Bergeim, Olaf.....	Drug Clerk, Brookings.
Davies, Gladys.....	Druggist, Letcher.
Harben, Bartlett L.....	Drug Clerk, Platte.

---

Locke, Chas.....	Drug Clerk, Yankton.
Wipf, Michael J.....	Drug Clerk, Freeman.

## CLASS OF 1907.

## MASTER OF SCIENCE.

Culhane, Michael E.....	Lawyer, Brookings.
-------------------------	--------------------

## BACHELOR OF SCIENCE.

Binnewies, Mabel E.....	Colman.
Briggs, Stephen F.....	Elec. Eng., Milwaukee.
Burch, Walter S.....	Schenectady, N. Y.
Christianson, Christine.....	Fairmont, Neb.
Dillman, Arthur C.....	Dept. of Agriculture, Wash., D. C.
Dutcher, Adams R.....	Ass't. in Chemistry, S. D. S. C.
Elliott, Bruce A.....	Student, S. D. S. C.
Elliott, Ross W.....	Brookings.
Fjerstad, Alman.....	Madison, Wis.
Gagel, Gerald.....	Redlands, Cal.
Hofstetter, Geo., Instructor in Manual Training, Govt. School, P. I.	
Kirk, John R.....	Springfield.
Johnson, Aaron G.....	Lafayette, Ind.
Knutson, Mabel A.....	Teacher, Dell Rapids.
McCordic, Clare.....	Western Elec. Co., Chicago, Ill.
McElmurry, Rilla.....	Student, Champaign, Ill.
Morton, Grant J.....	Fargo, N. D.
Reich, J. Carl.....	Western Elec. Co., Chicago, Ill.
Salmon, Cecil.....	Sub-Station, Belle Fourche.
Sanderson, Eugene.....	Schenectady, N. Y.
Tuttle, Volney J.....	Schenectady, N. Y.
Underwood, Genevieve.....	Bryant.
Westcott, Ruth M.....	Student, Chicago, Ill.
Work, Mary L.....	Watertown.

## PHARMACY GRADUATES.

Dexter, David F.....	Centerville.
Roney, Ray W.....	Sioux Falls.
Ennis, Herbert I.....	Druggist, Bruce.
Kartrude, Inga M.....	Student, S. D. S. C.

## CLASS OF 1908.

## MASTER OF SCIENCE.

Coller, Fred A.....	Student, Harvard University.
Koch, Arthur E.....	Ass't. in Chemistry, S. D. S. C.

## ELECTRICAL ENGINEER.

Elliott, Ross W.....	Brookings.
----------------------	------------

## BACHELOR OF SCIENCE.

Alton, Benjamin H.....	Ass't. in Zoology, S. D. S. C.
Bergeim, Olaf.....	Drug Clerk, Brookings.
Carpenter, Clarence A.....	Teacher, Rapid City.
Chilcott, Ralph A.....	Student, Washington University, D. C.
Cooley, William R.....	Student, University of Illinois.
Griffith, T. Edwin.....	Electrical Engineer, Sioux City, Ia.
Holsey, Ernest.....	Electrical Engineer, Sioux Falls.

---

Hubbart, Edith J.....	Teacher, Overly, N. D.
Hyde, Hallie W.....	Student, University of Illinois.
Kelly Amy.....	Student, University of Illinois, Urbana.
Kendall, Nellie G.....	Student, S. D. S. C.
Locke, Francis J.....	Electrical Engineer, Cincinnati, O.
Mathews, Oscar R.....	Student, S. D. S. C.
*Mayland, Amy.....	
Mayland, George R.....	Brookings.
Nelson, Aaron L.....	Student, University of Wisconsin, Madison.
Nilsson, Edward.....	Brookings.
Olberg, Fred C.....	Drug Clerk, Seattle, Wash.
Perry, William J.....	Brookings.
Soreng, Edward M.....	Electrical Engineer, Cincinnati, O.
Sperb, John J.....	Portland, Ore.
Ulrich, Darwin William.....	Electrical Engineer, Seattle, Wash.
Underwood, Beatrice.....	Teacher, Bryant.
Underwood, Loto R.....	Teacher, Bryant.
Weeks, Gordon A.....	Mechanical Engineer, Livingston, Mont.
West, Florence E.....	Student, University of Minnesota, Minneapolis.
Whitehead, Lindsey W.....	Instructor in Mathematics, S. D. S. C.
Williams, Ruby.....	Teacher, Brookings.

#### PHARMACY GRADUATES.

Murphy, James P.....	Drug Clerk, Huron.
Quiggle, Ernest J.....	
Hoch, Joseph L.....	
Olberg, Fred C.....	Drug Clerk, Seattle, Wash.

---

## STUDENT LIST

---

### Postgraduate Students

Alton, Ben.....	Chemistry .....	Brookings
Dutcher, R. Adams.....	Chemistry .....	Brookings
Elliott, Bruce.....	Electrical Engineering.....	Brookings
Evans, Edna.....	Music .....	Brookings
Hage, Christian.....	Pharmacy.....	Toronto
Kendall, Nellie.....	Music .....	Brookings
Mathews, Oscar.....	Agriculture .....	Brookings
Schaphorst, William.....	Mechanical Engineering....	New Mexico
Whitehead, Lindsey.....	Electrical Engineering.....	Brookings
Williams, Ruby.....	Music .....	Brookings
Youngberg, Guy.....	Pharmacy .....	Brookings

### Seniors

Bacon, Eva.....	General Science.....	Brookings
Bushnell, Edna.....	Home Economics.....	Brookings
Camp, Fred.....	Electrical Engineering.....	Ree Heights
Catlett, Winifred.....	General Science.....	Brookings
Champlin, Manley.....	Agriculture.....	Faulkton
Clark, Roy.....	General Science.....	Howard



Coughlin, Charles.....	Electrical Engineering.....	Carthage
Denhart, Cecil .....	General Science.....	White
Erwin, Ada.....	Home Economics.....	Brookings
Evans, Iva.....	Home Economics.....	Brookings
Furnstahl, John.....	Civil Engineering.....	Howard
Jensen, Harvey.....	General Science.....	Brookings
Jones, Robert.....	General Science.....	Revillo
Kremer, Alvin.....	Electrical Engineering.....	Brookings
Kremer, Henrietta.....	General Science.....	Brookings
Lane, Lloyd.....	Electrical Engineering.....	Alcester
McKeown, Ralph.....	Civil Engineering.....	Elkton
Marquis, Sidney.....	Mechanical Engineering.....	Clear Lake
Matheny, Chester.....	Electrical Engineering.....	Brookings
Odland, John.....	General Science.....	Beach, N. D.
Palm, Ellen.....	General Science.....	Norden
Peirce, Ruth.....	General Science.....	Brookings
Phillips, George.....	Electrical Engineering.....	Webster
Sarvis, Johnson.....	Agriculture .....	Brookings
Sperb, Frank.....	Electrical Engineering.....	Brookings
Swering, Joseph.....	General Science.....	De Smet
Treacy, Timothy.....	Civil Engineering.....	Howard
Vernlund, Carl.....	Agriculture .....	Astoria
White, Orland.....	Agriculture .....	Delmont
Wickre, Jacob.....	Agriculture .....	Webster
Wright, Mary.....	General Science.....	De Smet

## Juniors

Atkinson, Fay.....	General Science.....	White
Barber, Floyd.....	Civil Engineering.....	Alpena
Biggar, Howard.....	General Science.....	Brookings
Crothers, Harold.....	General Science.....	Brookings
Crothers, Ralph.....	Agriculture .....	Brookings
Doughty, Clifton.....	Civil Engineering.....	White
Fickle, Walter.....	Civil Engineering.....	Blunt
Finch, Laura.....	Home Economics.....	Brookings
Fridley, Ray.....	Electrical Engineering.....	Brookings
Grotta, Edwin.....	Civil Engineering.....	Manchester
Hyde, Owen.....	Electrical Engineering.....	Brookings
Johnson, Charles.....	Civil Engineering.....	Hetland
Johnson, Millie.....	Home Economics.....	Hardwick, Minn.
Kartrude, Inga.....	General Science.....	Hardwick, Minn.
Kelly, T. B.....	General Science.....	Brookings
Ladd, Amy.....	Home Economics.....	Brookings
Lothrop, Elmer.....	Electrical Engineering.....	Academy
Lloyd, Robert.....	Electrical Engineering.....	Brookings
Matheny, Alice.....	Home Economics.....	Brookings
Matheny, Fred.....	Civil Engineering.....	Conde
Morris, Effie.....	Home Economics.....	Brookings
Morrison, Joseph.....	Agriculture.....	Top Bar
Nagel, Herman.....	Agriculture.....	Berlin, Germany
Ort, Albert.....	Civil Engineering.....	Bensonville, Ill.
Palm, Andrew.....	Agriculture .....	Norden
Randall, Frank.....	Mechanical Engineering.....	Brookings
Sexauer, Elmer.....	General Science.....	Brookings
Sheldon, Nettie.....	General Science.....	Brookings
Twiss, Robert.....	Electrical Engineering.....	Athol
Wahl, William.....	Civil Engineering.....	Columbia
Welch, Cecile.....	General Science.....	Brookings



---

Wilson, Frank.....	Pharmacy .....	Brookings
Wohlheter, Verne.....	General Science.....	White
Yocum, Frank.....	General Science.....	Parker

## Sophomores

Abbott, Guy.....	Pharmacy .....	De Smet
Atwood, George.....	Agriculture .....	Erwin
Balmat, John H.....	Electrical Engineering.....	Yankton
Buck, Ervin R.....	Pharmacy .....	Doland
Cooledge, Leslie.....	General Science.....	De Smet
Cottingham, J. T.....	General Science.....	Mt. Vernon
Crosby, L. J.....	Pharmacy .....	Hitchcock
Dickey, James.....	Pharmacy .....	Iroquois
Erwin, Ruth.....	Home Economics.....	Brookings
Finley, Volmar.....	Agriculture .....	Miller
Fridley, Bess.....	Home Economics.....	Brookings
Fridley, Richard.....	General Science.....	Brookings
Gropengieser, Fred.....	Electrical Engineering.....	Onida
Haas, Carrie.....	General Science.....	Arlington
Hallen, Harold.....	Electrical Engineering.....	Brookings
Huntimer, Percy.....	Agriculture .....	Madison
Jarman, Mabel.....	Home Economics.....	Brookings
Johnson, Clifford.....	Agriculture .....	Hitchcock
Kilpatrick, A. V.....	Electrical Engineering.....	Houghton
Knutson, Geneva.....	Home Economics.....	Brookings
Lattin, Herbert.....	Electrical Engineering.....	De Smet
McMillan, O. G.....	Electrical Engineering.....	Alpena
Mathewson, Lynn.....	Mechanical Engineering.....	Tripp
Mathews, Irvin J.....	Electrical Engineering.....	Madison
Meharg, Max.....	Electrical Engineering.....	Brookings
Millham, Charles.....	General Science.....	Hot Springs
Mitchell, Harry E.....	Electrical Engineering.....	De Smet
Odland, Henry.....	General Science.....	Hurley
Odland, Ole N.....	Civil Engineering.....	Parker
Paul, Walter.....	Civil Engineering.....	Brookings
Pence, Clay.....	Electrical Engineering.....	Howard
Peterson, Helen.....	Home Economics.....	Brookings
Plocker, Florence.....	Home Economics.....	Brookings
Quinn, Roy.....	Agriculture .....	Arlington
Radcliffe, Stewart.....	Electrical Engineering.....	Howard
Robinson, Pierre.....	General Science.....	Cherry Creek
Stepard, Helen.....	General Science.....	Brookings
Sherin, Harry C.....	Pharmacy .....	Watertown
Starring, Cecil.....	Agriculture.....	Battle Creek, Neb.
Swenehart, John, Jr.....	Agriculture .....	Brookings
Thorne, William B.....	Electrical Engineering.....	Hartford
Tinker, Mabel.....	Home Economics.....	Brookings
Throop, Lotta.....	General Science.....	Brookings
Ulrich, George H.....	Electrical Engineering.....	Alma, Wis.
Walters, Leonard.....	Agriculture .....	Bruce
Wilson, Roy.....	General Science.....	Brookings

## Freshmen

Acheson, Roy.....	Civil Engineering.....	Montrose
Basgen, Fred.....	Electrical Engineering.....	Goodwin
Bibby, Irwin J.....	Civil Engineering.....	Galesville, Wis.
Burgess, N. J.....	Electrical Engineering.....	White

Carey, Edward.....	Mechanical Engineering.....	Bryant
Clark, Ralph.....	Civil Engineering.....	Langford
Crane, Vance.....	Civil Engineering.....	De Smet
Dachtler, Fred.....	General Science.....	Sturgis
Denhart, William.....	Agriculture.....	White
Edmonds, Clarence.....	Electrical Engineering.....	Salem
Edson, Ray.....	Electrical Engineering.....	Alcester
Engstrom, Carl.....	Electrical Engineering.....	Redfield
Erdman, Henry.....	Pharmacy.....	Armour
Gale, Nelson.....	General Science.....	Brookings
Goldthorp, George.....	Pharmacy.....	Turton
Gough, Oscar.....	Electrical Engineering.....	Canova
Granger, Paul.....	Electrical Engineering.....	Brookings
Harwood, Ernest.....	Agriculture.....	Avon
Hemingway, Robert.....	General Science.....	Brookings
Herse, Harry.....	Agriculture.....	Canova
Holleman, William.....	Pharmacy.....	Springfield
Holstrom, William.....	Pharmacy.....	Howard
Hough, Roy.....	General Science.....	Sturgis
Jensen, Russell.....	Agriculture.....	Mitchell
Johnson, Frank S.....	Mechanical Engineering.....	Pierpont
King, Stanley.....	Civil Engineering.....	South Shore
Levitt, Lola.....	General Science.....	Arlington
Lindskog, Telia.....	General Science.....	Bruce
Marchant, Guy.....	Electrical Engineering.....	Redfield
Martin, Earl.....	Pharmacy.....	Wessington
Osborn, Lynn.....	Agriculture.....	Flandreau
Peck, Arthur.....	Electrical Engineering.....	Windson, Conn.
Pier, Albert.....	Civil Engineering.....	Woonsocket
Pier, Clarence.....	Civil Engineering.....	Woonsocket
Pond, Dayton.....	Pharmacy.....	Brookings
Pratt, C. V.....	Electrical Engineering.....	Summit
Reeve, John.....	Electrical Engineering.....	Howard
Revell, Grace.....	General Science.....	Brookings
Sauder, William.....	Agriculture.....	Milwaukee, Wis.
Schaphorst, Ben.....	General Science.....	Brookings
Shea, Henry.....	Pharmacy.....	Brookings
Skinner, Lela.....	General Science.....	Brookings
Sparks, Henry.....	Civil Engineering.....	Sturgis
Sullivan, Effner.....	Electrical Engineering.....	Turton
Swanson, John.....	Pharmacy.....	Pierre
Throop, Ross.....	Civil Engineering.....	Brookings
Tommeraasen, Corne.....	Pharmacy.....	Rutland
Vercoe, Lewis E.....	Electrical Engineering.....	Carthage
Vis, Heyme.....	Pharmacy.....	Harrison
Vanlaningham, A.....	Pharmacy.....	Perry, Ia.
Williams, Arthur R.....	Pharmacy.....	Langford
Wilson, Mary.....	General Science.....	Aurora
Wornson, Harry.....	Pharmacy.....	Hadley

## PREPARATORY

### Third Year

Anderson, Elmer .....	Veblen
Armstrong, Inez .....	Brookings

Bell, Claude .....	Urbana, Ill.
Bogen, Samuel .....	Hendricks, Minn.
Brigham, Ruth .....	Brookings
Cole, Glenn .....	Gary
Dye, Edwin .....	Richards
Dye, Grace .....	Richards
Dye, Leonard .....	Richards
Fitzgerald, Raphael .....	Howard
Gamble, Charles .....	Brookings
Greenly, Maurice .....	Brookings
Grinols, Hazel .....	Brookings
Huyck, Nina .....	Lebanon
Jerlow, Morris .....	St. Mary's
Johnson, Leon .....	Canova
Johnson, Elmer .....	Brookings
King, Carrie .....	Colman
Koehler, Bessie .....	Madison
Kramer, Ralph .....	Brookings
Lockhart, James .....	Brookings
Matheny, Hazel .....	Conde
Mathews, Arthur .....	Brookings
Nilsson, Anna .....	Gary
Orth, Etoilla .....	Flandreau
Orth, Ruby .....	Flandreau
Page, Ferd C. ....	Brookings
Peirce, Claude .....	Brookings
Rilling, Harry .....	Brookings
Shanley, Clarence .....	Mansfield
Shepard, Albert .....	Brookings
Soule, Roy H. ....	Brookings
Soule, Scott .....	Brookings
Stewart, Fay .....	Bath
Wheaton, Ray .....	Brookings
Wheaton, Robert .....	Brookings

## Second Year

Ames, Golda .....	Brookings
Dachtler, William .....	Sturgis
Dyce, Reuben .....	Wentworth
Dye, Pearl .....	Richards
Edmonds, .....	Salem
Enger, Dollie .....	Bailey
Herse, Ola .....	Canova
Jenney, Lawrence .....	Delmont
Lawler, Frank .....	Ree Heights
McKenney, Robert .....	Bradley
Mears, Hugh W. ....	Bancroft
Myers, Herbert .....	Canistota
Nord, Florence .....	Brookings
Olson, Viola .....	Brookings
Patterson, Edith .....	Canova
Peirce, Earl .....	Flandreau
Rehnke, William .....	Crandon
Robinson, Henry .....	Cherry Creek
Slagle, Lee .....	Spencer
Uelschi, Ida .....	Brookings
Wornson, Walter .....	Hadley



## First Year

Aaland, Hilda.....	Howard
Ackers, John.....	Rochester, Minn.
Allen, Nina.....	Brookings
Anderson, Leslie.....	Brookings
Anderson, Robert.....	Centerville
Bennett, Susie.....	Chicago, Ill.
Bergjord, Alfred.....	Toronto
Bjornstad, Henry.....	Bruce
Brookens, Floyd.....	Parker
Cavner, Clarence.....	Flandreau
Culhane, Alexander.....	Elkton
Culhane, James L. ....	Elkton
Culhane, Roger.....	Elkton
Dworak, Clara E. ....	Wentworth
Ebbesen, Minor.....	Viborg
Espland, Clara.....	Wentworth
Ebe, George.....	Caledonia,, Wis.
Faris, Clifford.....	Flandreau
Fournier, Leon.....	Cambridge, Mass.
Helm, Fred.....	Selby
Heiser, Mary.....	White
Herbst, William.....	Mt. Vernon
Hillan, Bertha.....	Wentworth
Hoag, Edna.....	Brookings
Honey, Floyd.....	Putney
Houghton, Jay.....	Osceola
Johnson, Frank M. ....	Wessington Springs
Johnson, Junia.....	Wessington Springs
Keiper, Valentine.....	Clayton
Kenney, Eugene.....	Elkton
Ladd, Bessie.....	Brookings
Mailey, Ina.....	Brookings
McCarty, Anna.....	Cavour
McCarty, Belle.....	Cavour
McGill, Vera.....	Brookings
Meyer, John C. ....	Marcus, Iowa
Olson, Arthur.....	Brookings
Alrick, Oscar.....	Brookings
Peterson, Martin.....	Renner
Ringgenberg, Mabel.....	Elkton
Ringgenberg, Pearl.....	Elkton
Sample, Evangeline.....	Brookings
Seeman, Lloyd.....	Rockham
Seim, Sarah.....	Willow Lakes
Shinnick, Fred.....	Waverly
Stephenson, Richard.....	Somers
Throop, V. D. ....	Brookings
Troup, James.....	Colman
Volden, Bertha.....	Sioux Falls
Volden, Olymphious.....	Sioux Falls
Wallner, William A. ....	Watertown
Walters, Paul.....	Bruce
Walton, Arthur.....	Hitchcock
Way, Earl.....	Plankinton
Way, Lulu.....	Plankinton



---

Wellman, Ernest .....	Colman
Whealy, Arthur .....	Colman

### Special Students

Atkinson, Ella .....	Brookings
Austad, George .....	Rushford, Minn.
Bacon, Lulu .....	Brookings
Bates, Mrs. M. C. ....	Brookings
Biggar, James .....	Brookings
Briggs, Edwinia .....	LeMars, Iowa
Brooks, Ray S. ....	Mansfield
Casley, Lulu .....	Brookings
Catlett, Marguerite .....	Brookings
Colborne, Bernice .....	Brookings
Colby, Anna .....	Hetland
Cole, Jessie .....	Brookings
Digre, Petra .....	Hendricks, Minn.
Edson, Arthur .....	Alcester
Eidsmoe, Ella .....	Beresford
Engel, William .....	Lake Benton, Minn.
Gamble, Anna .....	Brookings
Graham, Myron .....	Beresford
Grimm, Emery L. ....	Parkston
Hanson, Jennie .....	Viborg
Heald, Harry .....	Letcher
Hegdal, Paul .....	Madison
Hess, Mary .....	Estelline
Hewitt, Curtis J. ....	Egan
Hurd, Sarah .....	Bruce
Huyck, Esther .....	Lebanon
Irish, Mildred .....	Doland
Johnson, Alvira .....	Brookings
Jones, Lynn .....	Valley Springs
Jorgensen, E. ....	Dell Rapids
Joseph, William .....	Iroquois
Keland, O. I. ....	Brookings
King, Chas. B. ....	Brookings
Kirby, Harold .....	Lebanon
Kirsch, Fred .....	Watertown
Kleine, Lella .....	Magnolia, Minn.
Koch, Albert .....	Eureka
Kukuk, Clara .....	Colman
Lawrence, Ethel .....	Doland
Lawshe, Ben .....	Brookings
Lindahl, A. J. ....	Strandburg
Ludlam, Eleanor .....	Brookings
Molskness, Marie .....	Colman
Moore, Grace .....	White
Nicholson, Lyda .....	Brookings
Nylander, Alice .....	Estelline
Olson, Louise .....	New London, Minn.
Orth, Dora .....	Flandreau
Paul, Winifred .....	Brookings
Rawson, George .....	Canistota
Ribstein, Luella .....	Bruce
Riegel, Cora .....	Maurice, Iowa
Rishoi, Miller .....	White

Robinson, Walter S. ....	Cherry Creek
Ruchti, Rudolph .....	Houghton
Ruttum, Bernt .....	Astoria
Scotchbrook, Frances .....	Wessington
Sherwin, Muriel .....	Brookings
Storm, Alvinia .....	Brookings
Tyler, John .....	Howard
Wiese, Ferdinand .....	Elkton
Yeandle, Arthur .....	Highmore

## Commercial Students

Anderson, Esther .....	Veblen
Anderson, Ida .....	Adrian
Bacon, Arthur .....	Brookings
Bacon, Harry .....	Brookings
Baker, Monroe .....	Redfield
Beck, Ottelia .....	Brookings
Beebe, Clayton .....	Brookings
Beebe, Clifford .....	Brookings
Brackett, Chas. ....	Murdo
Brown, Walter .....	Brookings
Burdett, Guy .....	Arlington
Chester, Harry .....	Lake Benton, Minn.
Cline, Maude .....	Garfield, Wash.
Comstock, Lulu .....	Brookings
Cowan, Glenn .....	Eau Galle, Wis.
Crosier Frank .....	Brookings
Davis, Cora .....	Castlewood
Doyle, John E. ....	Clear Lake
Durland, Ben .....	Brookings
Finley Wm. ....	Carthage
Groff, Mabelle .....	Brookings
Halverson, Hattie .....	Hardwick, Minn.
Halvorson, Oscar .....	Toronto
Hanson, Otto .....	Webster
Hanson, Torry .....	Webster
Haugen, Alfred .....	Revillo
Haugen, Thorwald O. ....	Brookings
Hawkins, Maude .....	Brookings
Haynes, Emma .....	Hudson, Mich.
Hoy, Della .....	Wauseon, Ohio
Irish, Ella .....	Doland
Johnson, Carl .....	Heron Lake, Minn.
Johnson, Dwight .....	Brookings
Kelton, DeLuce .....	Henry
Korstad, Emil .....	Waubay
Landle, Louis .....	Goodwin
McCarty, Fred .....	Cavour
Morton, Richard D. ....	Sisseton
Nelson, Gertrude .....	Brookings
Olson, Herman .....	Effington
Olson, Roy .....	Brookings
Porter, Fred .....	Lake Benton, Minn.
Poole, Neva .....	Brookings
Rhoades, William .....	Bradley
Rittman, Walter .....	Brookings
Sample, Joseph .....	Brookings

---

Severson, Chester .....	Brookings
Smith, Nellie B. ....	Brookings
Smith, Otto .....	Mansfield
Spurling, Edwin .....	Brookings
Stearns, Laura .....	Pierre
Treacy, James P. ....	DeSmet
Walters, Verne .....	Bruce
West, Amy K. ....	Brookings

## Music Students

Ames, Golda.....	Brookings
Anderson, Leslie .....	Brookings
Boice, Leonard .....	South Shore
Boice, Mildred .....	South Shore
Brackett, Charles .....	Murdo
Brenneman, Walter .....	Wessington Springs
Briggs, Edwinia .....	Le Mars, Iowa
Camp, Fred .....	Ree Heights
Casley, Bertha .....	Brookings
Casley, Lulu .....	Brookings
Catlett, Marguerite .....	Brookings
Cole, Jessie .....	Brookings
Connell, Fred .....	Alexandria
Culhane, Roger .....	Elkton
Dworak, Clara .....	Wentworth
Dye, Grace .....	Richards
Dye, Pearl .....	Richards
Edmonds, Rex .....	Salem
Eidsmoe, Ella .....	Beresford
Enger, Dollie .....	Bailey
Evans, Edna V. ....	Brookings
Finch, Laura .....	Brookings
Fridley, Bess .....	Brookings
Gamble, Anna .....	Brookings
Gerner, Sylvia .....	Platte
Hanson, Jennie .....	Viborg
Heglie, John .....	Effington
Hemingway, Robert .....	Brookings
Herbst, William .....	Mt. Vernon
Hess, Mary .....	Estelline
Hillan, Bertha .....	Wentworth
Hurd, Sarah .....	Bruce
Huyck, Esther.....	Lebanon
Huyck, Ida .....	Lebanon
Irish, Mildred.....	Doland
Johnson, Alvira.....	Brookings
Johnson, Esther.....	Brookings
Jones, Lynn.....	Valley Springs
Kendall, Nellie.....	Brookings
Kirby, Harold.....	Lebanon
Kirsch, Elizabeth.....	Watertown
Kleine, Lelia.....	Magnolia, Minn.
Ladd, Bessie.....	Brookings
Lawrence, Ethel .....	Doland
Leekley, Aurora.....	Brookings
Levitt, Lola.....	Arlington
Lindahl, A. J.....	Strandburg

Lindskog, Tella.....	Bruce
Lone, Sarah.....	Wentworth
Moore, Grace.....	White
Nylander, Alice.....	Estelline
Olson, Louise.....	New London
Orth, Etoilla.....	Flandreau
Orth, Ruby.....	Flandreau
Peterson, Ora.....	Brookings
Ribstein, Luella.....	Bruce
Sample, Evangeline.....	Brookings
Scotchbrook, Frances.....	Wessington
Seim, Sarah.....	Willow Lakes
Sherwin, Muriel.....	Brookings
Skinner, Lela.....	Brookings
Speirs, Clarence C.....	Ree Heights
Speirs, John R.....	Ree Heights
Stengel, Anna.....	Milbank
Storm, Alvinia.....	Brookings
Swenehart, John Jr.....	Brookings
Tommersaasen, Corne.....	Rutland
Volden Bertha.....	Sioux Falls
Wein, Rosa.....	Butler
Williams, Ruby.....	Brookings

### School of Agriculture

Aldern, John.....	Wentworth
Anderson, Ernest C.....	Crooks
Anderson, Milo P.....	Hetland
Baner, George.....	Watertown
Baner Harry.....	Watertown
Berkey, William E.....	Ashton
Bisgard, Soren.....	Waubay
Boice, Leonard.....	South Shore
Boice, Mildred.....	South Shore
Brekke, Martin.....	Renner
Brenneman, Walter.....	Wessington Springs
Brown, David L.....	Wessington
Brown, Hannah E.....	Canova
Carlsen, Palmer A.....	Marquette, Wis.
Caverhill, William A.....	Castlewood
Carter, Martha.....	Menno
Connell, Fred.....	Alexandria
Cull, George C.....	Hot Springs
Dahl, Edwin C.....	Canton
Davison, Albert W.....	Yankton
Digre Peter.....	Hendricks, Minn.
Eagle, Edna.....	Wessington Springs
Eggie, Carrie.....	Wentworth
Eggleston, Earl.....	Parker
Fahlberg, Joel J.....	Beresford
Gerner, Chas.....	Platte
Gerner, Sylvia.....	Platte
Gile, John P.....	White
Granberg, Albin C.....	Canova
Gudahl, Richard G.....	Oldham
Hale, Irene.....	Wessington Springs
Hauge, Carvel.....	Webster



---

Hood, Lee B.....	Spearfish
Huggett, Russell .....	Roslyn
Jenney, Tracy .....	Delmont
Johnson, John S.....	Marian
Johnson, Horace .....	Pierpont
Johnson, Melvin .....	Hartford
Johnson, M. O.....	Pierpont
Johnson, Joseph .....	Mt. Vernon
Johnson, Ward .....	Pierpont
Jones, Lilly .....	Ipswich
Jorde, Sigurd .....	Vienna
Kirkeby, Clarence .....	Naples
Kirsch, Elizabeth .....	Watertown
Knudson, T. H.....	Pierpont
Kurtz, Gustave A.....	Bushnell
Lakings, Herbert .....	Hurley
Lakings, Roy .....	Hurley
Lockrem, Oscar C.....	Pierpont
Lone Mikkell .....	Wentworth
Lone, Sarah .....	Wentworth
Love, Jay .....	Hartford
Ludwig, Ben J.....	Dempster
Lyle, Wm. M.....	Beresford
Mansfield, Richard R.....	Rapid City
Mellem, Oscar J.....	Viborg
Nelson Agnes .....	Hurley
Metcalf, Nettie .....	Garretson
Nelson, Alfred E.....	Stockholm
Nelson, Alice M.....	Platte
Nelson, Edward .....	Mt. Vernon
Nelson, Gabriel .....	Wakonda
Nelson, Harry M.....	St. Onge
Nelson, Smith M.....	Clark
Newcomb, Earl .....	Woonsocket
Osbeck, Bettie .....	Bruce
O'Hara, John E.....	DeSmet
Olson, Emil .....	Brookings
Pearson, Carl J.....	Hartford
Price, Milo H.....	Tulare
Pum, Ida .....	Watertown
Rebrud, Clarence .....	Ipswich
Roundseville, Sam .....	DeSmet
Rumboltz, Emanuel .....	Ethan
Schurman, Walter .....	Waverly
Schwantes, Harry.....	Big Stone
Sharp, Clarence .....	Bristol
Sharp, Millie E.....	Bristol
Speirs, Clarence C.....	Ree Heights
Speirs, John R.....	Ree Heights
Stengel, Anna .....	Milbank
Stenson, Gustava .....	Faulkton
Swenson, Henry .....	Hartford
Thompson, George W.....	Viborg
Thompson, John .....	Letcher
Thompson, Jullus C.....	Platte
Tinker, Bessie D.....	Brookings
Tomson, Anna B.....	Elmont

Traphagen, G. Lynn .....	Britton
Troup, William N. ....	Colman
Tyler, Lewis .....	Renner
Van De Mark, Henry .....	Hartford
Vehe, Clara R. ....	Bristol
Vercoe, Lewis E. ....	Carthage
Warnes, Marianne A. ....	Volga
Watson, Earl E. ....	Mitchell
Weber, Arnold .....	Farmer
Wein, Rosa .....	Butler
Wnertz, Fred .....	Hartford
Wop t, Dan .....	Vienna
Zech, Alma .....	Watertown

## Short Course in Steam Engineering

Anderson, Christian .....	Hetland
Anderson, Thorwald .....	Hetland
Artz, William J. ....	Stickney
Bierman, Fred .....	Mansfield
Burns, Dennie F. ....	Bancroft
Carter, Telle .....	Menno
Dahl, Fred .....	Tolstoy
Edmonds, Rex D. ....	Salem
Gehring, Henry A. ....	Howard
Hart, Oris R. ....	Canton
Heglie, John .....	Effington
Hellekson, Theodore .....	Volga
Hensinkveld, Derk .....	Corsica
Herbst, William C. ....	Mt. Vernon
Hilts, Alvia F. ....	Hazel
Hofer, Samuel .....	Carpenter
Johnson, Ingvald H. ....	Viborg
Johnson, Rudolph S. ....	Redfield
Kadinger, John W. ....	Hartford
Kvernes, Albert O. ....	Howard
Leonard, Ralph .....	Ramona
Lorshbough, Henry .....	Clark
Mathieson, Ole .....	Butler
Mosby, Wilhelm .....	Menno
Olson, Charles .....	Garretson
Olson, Otto .....	Pierpont
Otto, George .....	Chamberlain
Perly, Elton S. ....	Flandreau
Phillipp, Henry .....	Fedora
Radtke, William M. ....	Milbank
Ray, Dillie .....	Andover
Robison, John W. ....	Ames
Runne, Ludwig .....	Menno
Ruttum, Julius J. ....	Hendricks, Minn.
Sollie, Chas. A. ....	Cortlandt
Sollie, Ernest L. ....	Cortlandt
Strande, Anton .....	Lake Preston
Swanson, Fred R. ....	Strandburg
Swenson, Ever W. ....	Fulton
Thorson, Christian .....	Aberdeen
Trygstad, Herbert M. ....	Brookings

---

Weeks, Charles .....	St. Lawrence
Westre, Oliver .....	Wakonda
Whipple, John M. ....	Highmore
Willey, Glenn D. ....	Brookings
Wilson, Leslie .....	Brookings
Wopat, Dan. ....	Vienna
Zeitschel, Arthur .....	Mitchell
Zick, Albert H. ....	Watertown

## Two Weeks Course in Agriculture

Anderson, V. E. ....	Rapid City
Aldern, John .....	Nunda
Alseike, Sever .....	Estelline
Anderson, Robert .....	Centerville
Artz, W. J. ....	Stickney
Bellamy, Paul E. ....	Hardingrove
Brekke, Martin .....	Renner
Brown, Sam C. ....	Clark
Brynjulson, Richard H. ....	Canton
Cattnach, Jess .....	Woonsocket
Christopherson, P. O. ....	Lily, S. D.
Cooke, Walter P. ....	Miller
Eagle, B. G. ....	Wessington Springs
Fiksdal, Olaf .....	Lily
Glissendorf, Clarence .....	White Lake
Graham, M. F. ....	Beresford
Hauge, Carvel .....	Webster
Hanson, Albin .....	Lily
Haugen, Henry .....	Lily
Huggett, Russell .....	Roslyn
Johnson, Ray .....	Doland
Kieser, H. W. ....	Wessington Springs
Lillie, Elmer .....	Woonsocket
Nelson, John .....	Lake Preston
Ostroot, S. J. ....	Canton
Pearson, Alfred .....	Hartford
Reynolds, Alfred .....	Rapid City
Sanderson, Lewis .....	Florence, Minn.
Sougstad, G. T. ....	Fulton
Stephan, Frank .....	Tolstoy
Taylor, C. J. ....	Lacy
Thompson, Herman .....	Baltic
Thompson, James .....	Baltic
Tunby R. ....	Houghton
Willey, Floyd .....	Brookings
Ulvilden, Olaf .....	Sioux Falls

## Two Weeks Course in Dairy Science

Baldwin, E. H. ....	Letcher
Barbaree, G. L. ....	Eagle
Christensen, John .....	Savo
Fossum, K. C. ....	Baltic
Gilchrist, George .....	Acondo, Wis.
Hansen, Chris .....	Stockholm
Hartwig, Carl .....	Castlewood
Jensen, J. L. ....	Carthage

Johnson, C. G. ....	Hartman
Jones, J. E. ....	Cottonwood
Nelson, John ....	Carthage
Radcliffe, O. N. ....	Huron
Rogers, E. C. ....	Lake View, Iowa
Ronayne, R. ....	Leola

## Summer School Students

Alden, Catherine .....	Brookings
Allen, Nina E. ....	Brookings
Alrick, Ida .....	Brookings
Bulger, John .....	Bushnell
Bane, Katie .....	Aurora
Brown, Gertrude .....	Elkton
Blakley, Mary E. ....	Brookings
Bolles, Laura J. ....	Brookings
Cotton, Geo. O. ....	Bruce
Coleman, A. D. ....	Bruce
Christianson, Malla .....	Volga
Cook, Cora .....	Alington
Casserly, Margaret .....	Elkton
Casserly, Sadie .....	Elkton
Christy, Clara .....	Volga
Calhune, Mollie .....	Aurora
Casserly, Elizabeth .....	Elkton
Davis, Clara .....	Brookings
Duff, Nettie .....	Brookings
Digre, Petra .....	Hendricks, Minn.
Digre, Marie .....	Hendricks, Minn.
Daken, Mamie .....	Brookings
Durby, Anna C. ....	Hendricks, Minn.
Doyle, Agnes M. ....	Clear Lake
Erickson, Minnie .....	Bruce
Eastwood, Louisa .....	Bruce
Emerson, Julia .....	Toronto
Etting, Ethel .....	Elkton
Feney, Margaret .....	Elkton
Feeney, Sadie .....	Elkton
Finch, Laura .....	Nevada Mo.
Farr, Rose .....	Bruce
Forseth, Gina .....	Brookings
Fiegel, Unis .....	Elkton
Godron, Marie .....	White
Gleeson, Frances .....	Elkton
Gleeson, Rose .....	Elkton
Gulick, Myrtle .....	Brookings
Getty, Jeunie .....	Brookings
Gunderson, Ida .....	Volga
Hoffman, Theresa .....	Bruce
Haskins, Martha .....	White
Hanse, Mable .....	Volga
Hartman, Tillie .....	Elkton
Handwerk, Frank .....	Bruce
Handwerk, Catherine .....	Bruce
Hoffman, Martha .....	Bruce
Iverson, Selma .....	Brookings



---

Jolly, Mrs. Ada .....	Castlewood
Jolly, W. G. ....	Castlewood
Johnson, William H. ....	Brookings
Jacobson, Anna E. ....	Canton
Jensen, Peter .....	Lake Benton, Minn.
Karlstad, Julie B. ....	Volga
Karlstad, Selma .....	Volga
Koester, Roy .....	Brookings
Knowlton, Pearl .....	Clear Lake
Kukuk, Clara .....	Wentworth
Knutson, Mable .....	Brookings
Karlstad, Mattie .....	Dempster
Long, Mrs. Elsie .....	Bruce
Little, Florence .....	Brookings
Loucks, Elizabeth .....	Clear Lake
Lucis, Maude .....	White
Loban, Carrie .....	Brookings
Loban, Jennie .....	Brookings
Moffatt, Margaret .....	Brookings
McNaramie, Ethel I. ....	Arlington
McElmurry, Loretta M. ....	Brookings
Murray, Nora .....	Kampeska
Murray, Rose .....	Kampeska
Madsen, Mae M. ....	Arlington
Murphy, Mae E. ....	Brookings
Moe, Jettie .....	Bruce
Murphy, Julia .....	Arlington
Nelson, Grace .....	Toronto
Nelson, Ida .....	Brookings
Olson Mabelle .....	Wessington Springs
Place, Mrs. Hattie .....	Brookings
Perry, Jennie .....	Brookings
Parker, Rose .....	Bruce
Parker, Ella .....	Bruce
Pierce, E. Esther .....	Brookings
Peterson, Tilda .....	Elkton
Peterson, Anna M. ....	Altamont
Plocker, Florence .....	Brookings
Pangborn, J. O. ....	Arlington
Phillips, Florence .....	Brookings
Quail, Hannah .....	Brookings
Rudolph, Ray L. ....	Brookings
Revel, Mary .....	Brookings
Revel, Alma .....	Brookings
Revel, Ellen G. ....	Brookings
Rufenacht, Grace .....	Elkton
Roehn, J. S. ....	
Rankins, Hattie .....	Bemis
Ryan, Mark .....	Colman
Rose, Charlotte .....	Brandt
Sloan, Margaret .....	Brookings
Spurling, Ethel .....	Brookings
Stearns, Mae .....	Brookings
Stuverude, Ida .....	Volga
Southard, Tena .....	Aurora
Strong, Lauretta .....	Elkton
Smith, Mamie .....	Brookings

Stermer, Laura .....	Aurora
Svaren, Selma .....	Volga
Sharpe, Blanche .....	Bruce
Sveen, Olga .....	Brookings
Sweeney, Ella M. ....	Colman
Strong, Mae .....	Elkton
Thornton, Guy .....	Aurora
Thorsness, Anna .....	Volga
Thompson, Lora .....	Volga
Tompkins, E. E. ....	White
Thompson, Anna .....	Toronto
Trygstad, Marie .....	Brookings
Trygstad, Margaret .....	Brookings
Vostad, Gena .....	Volga
Williams, Ruby .....	Brookings
Wallen, Dora .....	Volga
Williams, Katie .....	Volga
Walters, Daisy M. ....	Bruce
Wendelken, Maude .....	Elkton
Walder, Eva .....	Colman
Waite, Frances .....	Bruce
Yankee, Anna .....	Brookings

---

## SUMMARY

---

Graduate Students .....	11
Collegiate Students—	
Seniors .....	31
Juniors .....	34
Sophomores .....	46
Freshmen .....	53
	<hr/>
	164
Preparatory Students—	
Third Year.....	36
Second Year.....	21
First Year.....	57
	<hr/>
	114
Commercial Students.....	54
Special Students .....	62
Music Students.....	70
School of Agriculture.....	103
Short Course Students—	
Steam Engineering.....	49
Two Weeks' Agriculture.....	36
Two Weeks' Dairy.....	14
	<hr/>
	99
Summer School.....	127
	<hr/>
Total .....	804
Names repeated.....	76
	<hr/>
Net Total.....	728

# INDEX

	Page		Page
Abbreviations .....	35	Dairying .....	55, 125
Absences .....	32	Debating .....	128
Adams Act.....	17, 53	Degrees .....	33, 34
Admission, Conditions of....	29, 30	Descriptive Geometry .....	68
Agriculture .....	35, 125	Design of Power Stations....	72
Agronomy .....	58	Dietetics .....	65
Alternating Currents.....	71	Domestic Art .....	64, 113
Alumni, List of.....	131	Dormitory .....	19, 24
Alumni Association.....	131	Drug Assaying.....	93
Anatomy .....	89	Dynamo Design .....	72
Animal Husbandry.....	54	Dynamo Electric Machinery..	71
Animal Nutrition.....	55		
Architectural Drawing and		Economics .....	81
Design .....	68	Electrical Engineering.....	43, 71
Art .....	106, 113	Elements of Mechanism.....	68
Art Club.....	29	Employees of College.....	12
Assistants .....	8	Engineering Design.....	69
Astronomy .....	84	Engineering Degrees .....	34
Athletics .....	27, 128	English .....	76, 110
Athletic Grounds.....	19	Entomology .....	87
		Entrance Conditions.....	30
Band .....	128	Equipment .....	17
Bacteriology .....	57, 64	Ethics .....	82
Bird Life .....	87	Euterpe Society.....	29
Bookkeeping .....	116	Excuses for Absences.....	32
Botany .....	85	Expenses, Students' .....	23, 95
Breeds of Live Stock.....	54	Experiment Station.....	16, 53
Buildings .....	17	Experimental Engineering...	69
Calendar .....	3	Faculty .....	5
Carpentry .....	112	Farm .....	18, 21
Chapel Exercises .....	27	Farm Crops.....	59
Cheesemaking .....	57	Farm Mechanics.....	60
Chemistry .....	89	Farm Management.....	60
Choral Union .....	29	Floriculture .....	62, 63
Christian Associations....	28, 128	Food and Dietetics.....	65
Civil Engineering .....	44, 73	Forestry .....	62
Clerical Force .....	10	Forging .....	112
Collegian Staff and Organiza-		Free Hand Drawing.....	107
tion .....	29, 128	French .....	79
Commercial Department.....	115		
Conditioned Students.....	32	Gas and Oil Engines.....	68
Contracts and Specifications	75	General Science Course.....	47
Cooking .....	66	General Information.....	14
Cytology .....	86	Genetics .....	62
		German .....	78
Dairy Husbandry.....	55	Geodesy .....	74

	Page		Page
Geology .....	60	Methods of Teaching.....	82
Graduates .....	131	Military .....	26, 108
Grades .....	31	Morrill Act.....	16
Gymnasium .....	19	Museums .....	18
		Music .....	94
Handicraft .....	108	Mycology .....	86
Hatch Act.....	16, 53		
Heat .....	85	Nature Study.....	87, 113
Heating .....	20, 70	Nelson Fund.....	16
Histology .....	89	Nursery Handicraft.....	63
History .....	80, 111		
History of Education .....	82	Operation of Creameries....	57
Home Economics .....	39, 64	Oratorical Association....	28, 128
Home Nursing.....	65	Organizations, Student....	27, 128
Horseshoeing .....	64		
Horticulture .....	61	Painting, Oil.....	107
Household Economy.....	65	Perspective .....	68
Household Sanitation.....	65	Pharmacognosy .....	87
Hydraulics .....	74, 76	Pharmacy .....	50, 91
Hygiene .....	65	Pharmacy Club.....	29
		Philosophy .....	81
Income, Sources of.....	15	Physical Culture .....	26
Invalid Cookery.....	65	Physics .....	84, 112
Irrigation .....	74	Physiography .....	113
Inspection of Dairy Products	56	Physiology .....	88
Installation of Power Plants	72	Piano Music.....	94
Instructors .....	8	Polyphase Currents.....	72
		Pomology .....	62
Jack Rabbit.....	29	Political Science.....	81
		Postal Facilities.....	20
Kinematics .....	69	Power Transmission .....	70
		Preparatory Department....	109
Laboratories .....	18	Prizes .....	29
Landscape Gardening .....	63	Psychology .....	82
Languages, Modern.....	78	Public Entertainments.....	27
Latin .....	77, 111	Publications, Student.....	29
Law .....	117		
Lecture and Class Rooms....	23	Railroad Engineering.....	75
Library .....	19, 110	Regents .....	4, 20
Light .....	85	Reinforced Concrete.....	76
Lighting .....	20	Registration, Method of ....	31
Literary Societies .....	27	Roads and Pavements.....	75
Living Arrangements of Stu-			
dents .....	22	Schemes of Study.....	34, 52
Location of College .....	15	Scholarships .....	25
		School of Agriculture.....	119
Machine Design .....	68	Sewerage .....	75
Machine Shop .....	67	Sewing .....	66, 113
Master's Degree.....	33	Shorthand .....	116
Mechanical Engineering, 41, 66,	112	Sociology .....	81
Masonry and Foundations ..	74	Soils .....	59
Materia Medica.....	93	Special Short Courses...3, 34,	125
Mathematics .....	82, 112	Special Students .....	30
Mechanics of Materials.....	69	Statics .....	70
Mechanical Drawing.....	68	Station Council .....	11
Mechanism, Elements of.....	68	Steam Boilers .....	69



	Page		Page
Steam Engineering.....	127	Textiles .....	65
Steam Engines .....	68	Testing of Power Plants....	72
Stock Breeding.....	54	Thermodynamics .....	68
Stock Feeding.....	55	Tuition .....	23, 95
Stock Judging .....	54	Tutoring .....	22, 32
Strains in Framed Structures	69	Typewriting .....	116
Structural Design and Engi- neering .....	70, 75	Uniforms, Military.....	23
Student Labor .....	25	Ventilation .....	70
Student List.....	142	Veterinary Anatomy.....	63
Student Organizations.....	27, 128	Veterinary Medicine.....	63
Student Publications.....	29	Veterinary Physiology.....	88
Subject Defined .....	30	Violin .....	94
Surveying .....	72, 73	Voice .....	94
Taxonomy .....	86	Water Supply .....	74
Teaching of Home Economics	66	Wood Turning .....	112
Telephone Engineering.....	71	Zoology .....	88, 113
Terms and Vacations.....	3, 23		
Time to Enter.....	22		





Vol. II

April 1910

No. IV

South Dakota  
State College of Agriculture  
and Mechanic Arts

Bulletin

UNIVERSITY OF ILLINOIS LIBRARY

UNIVERSITY OF ILLINOIS

FEB 1 1921

PRESIDENT'S OFFICE

JUN 28 1910

*Annual Catalog*  
1909 - 1910

Published Quarterly by  
SOUTH DAKOTA STATE COLLEGE  
BROOKINGS, S. D.

Entered as second-class matter August 10, 1908, at  
the postoffice at Brookings, S. D., under  
Act of July 16, 1904



## THE COLLEGE BULLETIN

The South Dakota State College Bulletin is Published quarterly by authority of the Regents of Education, in a regular series.

The Bulletin contains information in detail relative to the entrance requirements of the different courses of instruction, the schedules of study, lists of instructors of the institution and its administration, equipment, organizations, publications, funds, students' expenses, scholarship, prizes, etc.

The institution includes the following college departments: Animal Husbandry, Dairy Husbandry, Agronomy, Horticulture and Forestry, Veterinary Medicine, Home Economics and Domestic Art, Mechanical, Electrical and Civil Engineering, English, Modern Languages, History and Political Science, Philosophy, Mathematics and Astronomy, Physics, Botany, Entomology and Natural Study, Zoology, Chemistry, Pharmacy, Music, Art, Military Science and Tactics, and Commercial Science.

There is also the Preparatory Department, the Agricultural Experiment Station and the School of Agriculture.

Additional short special courses of instruction are given at the institution in Agriculture, Dairying, Home Economics, and Steam Engineering. Correspondence courses are also being arranged in Agriculture, Natural Study and Home Economics. Bulletins are sent free, postage paid, on request. The request should indicate the department concerning which information is desired.

Address: The President, State College, Brookings, South Dakota.

Vol. II

April 1910

No. IV

South Dakota  
State College of Agriculture  
and Mechanic Arts  
Bulletin

UNIVERSITY OF ILLINOIS

---

---

PRESIDENT'S OFFICE

*Annual Catalog*  
1909 - 1910

---

Published Quarterly by  
SOUTH DAKOTA STATE COLLEGE  
BROOKINGS, S. D.

Entered as second-class matter August 10, 1908, at  
the postoffice at Brookings, S. D., under  
Act of July 16, 1904



## Calendar of 1909-10

---

1910

### FIRST SEMESTER

- September 19-20—Entrance examinations and registration.  
September 21—Work of first semester begins at 8 o'clock a. m.  
September 30—Faculty reception to students.  
November 1—Last day for announcing subjects for theses.  
November 1—School of Agriculture opens.  
November 24-25—Thanksgiving recess.  
December 21—First term of School of Agriculture closes.  
December 21—Christmas vacation begins at 4:15 p. m.

1911

- January 3—Christmas vacation ends at 8:00 a. m.  
January 3—Second term of School of Agriculture begins.  
January 30-February 3—Examination week.

### SECOND SEMESTER

- February 7—Second semester begins at 8:00 a. m.  
March 30—School of Agriculture closes.  
March 30-April 4, inclusive—Spring vacation.  
May 29—Senior vacation begins.  
June 5-9—Examination week.  
June 11—Baccalaureate Sunday.  
June 14—Commencement exercises at 10:30 a. m.

---

## Calendar of Short Courses

---

- January 3-June 9—Short course in Steam Engineering.  
January 3-March 24—Three months creamery course.  
January 3-January 13—Short courses in poultry husbandry,  
stock judging and corn judging.



## Regents of Education

---

*HON. E. C. ERICSON.....	Elk Point
HON. A. J. NORBY.....	Sisseton
HON. ALBERT M. ANDERSON.....	Sturgis
HON. A. E. HITCHCOCK.....	Mitchell
HON. T. W. DWIGHT.....	Sioux Falls

---

## Officers of the Board

---

*HON. E. C. ERICSON.....	President
HON. I. D. ALDRICH.....	Secretary
HON. GEORGE G. JOHNSON, (State Treasurer).....	Treasurer

---

## Regents' Committee for the College

---

HON. A. J. NORBY.....HON. A. E. HITCHCOCK

\*Died February 7, 1910.

## **\*Faculty**

---

### **ROBERT LINCOLN SLAGLE, A. M., Ph. D., President.**

A. B., Lafayette College, 1887; A. M., Lafayette College, 1890; Ph. D., Johns Hopkins University, 1894; Assistant to Professor W. O. Atwater in food investigation, Middletown, Connecticut, and New York City, 1894-1895; Professor of Chemistry, South Dakota Agricultural College, 1895-1897; President and Professor of Chemistry South Dakota School of Mines, 1897-1905; present position since 1906.

### **JAMES HENRY SHEPARD, B. S., Professor of Chemistry.**

B. S., University of Michigan, 1875; Post-Graduate Student in University of Michigan, 1881-1882; Instructor in Natural Sciences, Ypsilanti, Michigan, High School, 1882-1886; present position since 1888.

### **HALVOR CHRISTIAN SOLBERG, M. E., Professor of Mechanical and Steam Engineering.**

B. S., South Dakota Agricultural College, 1891; B. M. E., Purdue University, 1895; M. E., Purdue University, 1896; Professor of Practical Mechanics, South Dakota Agricultural College, 1891-1896; present position since 1896.

### **NIELS EBBESEN HANSEN, M. S., Professor of Horticulture and Forestry.**

B. S., Iowa Agricultural College, 1887; M. S., Iowa Agricultural College, 1894; Commercial Iowa Nurseries, Atlantic and Des Moines, 1888-1891; Assistant Professor in Horticulture, Iowa Agricultural College, 1891-1895; Studied in Europe, 1894; Agricultural Explorer for U. S. Department of Agriculture to Europe and Asia, 1897-1898, and 1906-1907; to Siberia, Turkestan and Algiers, 1908-1909; present position since 1895.

### **HUBERT BERTON MATHEWS, M. S., Professor of Physics.**

B. S., South Dakota Agricultural College, 1892; M. S., South Dakota Agricultural College, 1899; pursued special work at various times in the Universities of Michigan, Wisconsin and Nebraska; Superintendent of City Schools, Clark, S. D., 1892-1893; Assistant in Chemistry and Physics, South Dakota Agricultural College, 1893-1896; Professor of Physics, 1896-1899; Professor of Physics and Electrical Engineering, 1899-1909; present position since 1909.

---

\*With the exception of the president, the names occur in the order of appointment.

**BOWER THOMAS WHITEHEAD, M. S., Ph. C., Professor of Pharmacy.**

Ph. G., South Dakota Agricultural College, 1895; Ph. C., Northwestern University, 1896; B. S., South Dakota Agricultural College, 1897; M. S., South Dakota Agricultural College, 1901; present position since 1896.

**GEORGE LINCOLN BROWN, Ph. D., Professor of Mathematics and Astronomy.**

B. S., University of Missouri, 1892; Teaching Fellow in Mathematics, 1892-1893; M. S., 1893; Fellow in Mathematics, University of Chicago, 1894-1896; Ph. D., University of Chicago, 1900; Acting President South Dakota State College, summer and fall of 1908; present position since 1896.

**EDWARD LOCKHART MOORE, B. S., D. V. S., Professor of Zoology and Veterinary Medicine.**

B. S., Cornell University, 1896; D. V. S., Columbian University, 1898; present position since 1898.

**ARTHUR BOONE CROSIER, Professor of Commercial Science.**

Student in Brandenburg Academy, Kentucky and New Albany Business College, Indiana; Principal of Shorthand Department Bryant and Stratton Business College, Chicago, 1896-1897; admitted to practice law in South Dakota, October, 1904; present position since 1898.

**ADA BERTHA CALDWELL, Professor of Industrial Art and Preceptress.**

Student Art Institute of Chicago, 1893-1897; Instructor in Art, Yankton College, 1897-1899; Professor of Industrial Art, South Dakota Agricultural College, 1899-1907; Student Teachers' College, N. Y., and Chase School of Art, N. Y., 1903-1904; Student Summer Course Handicraft Guild, Minneapolis, 1905, 1906 and 1907; present position since 1907.

**ROBERT BLACKWOOD FORSEE, Pe. P., Principal of Preparatory Department.**

Principal of Pedagogy, Western College, Missouri, 1888; Principal Elgin, Missouri, Schools, 1889-1891; Steffenville, 1892-1893; Estelline, South Dakota, 1895-1896; County Superintendent Hamlin County, South Dakota, Schools, 1896-1900; present position since 1901.

**ALBERT SPENCER HARDING, A. M., Professor of History and Political Science.**

B. S., South Dakota Agricultural College, 1892; Fellow in American History, University of Nebraska, 1896-1897; A. M., University of Nebraska, 1897; Assistant in History and Civics, South Dakota Agricultural College, 1897-1900; present position since 1901.

**JAMES WILBUR WILSON, M. S. A., Director of the Experiment Station and Professor of Animal Husbandry.**

B. S. A., Iowa Agricultural College, 1896; M. S. A., Iowa Agricultural College, 1898; Assistant in Agriculture at the Iowa Agricultural College, 1896-1897; Private Secretary to Secretary of Agriculture, 1897-1900; present position since 1902.

**WILLIAM HOWARD POWERS, A. B., M. A., Librarian and Associate Professor of English.**

A. B., Miami University, 1891; A. M., Harvard University, 1899; Student in the Graduate School, Harvard, 1899-1901; Instructor in Mathematics, Ohio Normal University, 1888-1889; Master of the High School, Marwich, Massachusetts, 1892-1895; Head of the Department of English, High School, Pawtucket, Rhode Island, 1895-1898; Professor of English, Huron College, 1901-1905; present position since 1905.

**WILLIAM SOLOMON HAYES, A. B., Professor of French and German.**

A. B., Harvard, 1899; Student in France, Germany, Italy and Spain, four years; Professor of the Romance Languages, University of Vermont, 1900-1905; present position since 1906.

**EDITH MARY WILCOX, B. L., Ed. B., Professor of Home Economics.**

B. L., University of California, Berkeley, California, 1905; Ed. B., University of Chicago, 1906; present position since 1906.

**HENRY HANSON LOUDENBACK, Professor of Music.**

Graduate Conservatory of Music, Campbell University, Holton, Kansas, 1902; Assistant in Piano and Theory of Music, Campbell University, 1901-1902; Director of School of Music, Atchinson County High School, Effingham, Kansas, 1902-1906; Student in Virgil Clavier Piano School, New York City, 1903; Repertory with Allen Spencer in American Conservatory, Chicago, 1906; Student of Pipe Organ under Bertram Weber, Chicago, 1906; present position since 1906.

**HOMER MUNRO DERR, A. M., Ph. D., Professor of Civil Engineering.**

A. B., Leland Stanford University, 1898; A. M., Columbia University, 1901; Ph. D., University of Pennsylvania, 1903; elected Scholar in Physics, Clark University, 1899, and Scholar in Geology, Columbia University, same year; Assistant in Physics, Columbia University, 1899-1901; Instructor in Mining Engineering and Geology, University of Wyoming, 1901-1902; Tyndall Fellow, University of Pennsylvania, 1902-1903; Superintendent of Mines and in charge of dam construction for hydraulic mining, Colombia, South America, 1903-1904; Professor of Mathematics and Civil Engineering, Clarkson School of Technology, 1904-1906; Engineer with South Dakota Railroad Commission, since 1908; Associate member American Society of Civil Engineers; present position since 1907.



**ARTHUR A. BRIGHAM, Ph. D., Principal, School of Agriculture; Director of Summer School.**

B. S., Massachusetts Agricultural College, 1878; Professor of Agriculture, Imperial College of Agriculture, Sapporo, Japan, 1888-1893; Ph. D., University of Goettingen, Germany, 1896; Professor of Agriculture, College of Agriculture and Mechanic Arts, Rhode Island, 1896-1901; Director Agricultural Experiment Station, Rhode Island, 1897-1901; Experimenting in Incubation, Ithaca, N. Y., 1901-1902; Director Columbia School of Poultry Culture, 1903-1904; Lecturer University of Nebraska, 1905-1906; Principal, School of Agriculture, State College, South Dakota, since 1907.

**EDGAR WILLIAM OLIVE, A. M., Ph. D., Professor of Botany.**

B. S., Wabash College, 1893; S. M., Wabash College, 1895; A. M., Harvard University, 1897; Ph. D., Harvard University, 1902; Assistant in Botany, Harvard University and Radcliffe College, 1897-1898; Instructor in Botany, Harvard and Radcliffe, 1898-1903; Research Student of Carnegie Institution of Washington at University of Bonn, 1904-1905, and at the University of Wisconsin, 1905-1907; Lecturer in Botany, University of Wisconsin, 1905-1907; present position since 1907.

**C. LARSEN, M. S. A., Professor of Dairy Husbandry.**

B. S. A., Iowa State College, 1902; M. S. A., Iowa State College, 1904; Study of European dairying, 1900; Dairy Instructor, Massachusetts Agricultural College, 1901; Assistant and Associate Professor of Dairying, Iowa State College, 1902-1906; Professor of Dairy Husbandry, Utah Agricultural College, 1907; present position since 1907.

**†MADISON CLAIR BATES, A. M., Professor of English.**

A. B., Williams College, 1904; A. M., Williams College, 1905; A. M., Harvard University, 1906; Instructor in English, University of Illinois, 1906-1907; present position since 1907.

**CLIFFORD WILLIS, S. B., M. S., Professor of Agronomy.**

Student at State Normal School, Illinois, Summer Sessions, 1894 and 1895; Student at Illinois Wesleyan University, 1898-1899; Sc. B., University of Illinois, 1900; M. S. in Agronomy, University of Illinois, 1906; Principal of Public Schools, Hudson, Illinois, 1893-1895; Principal of High School, Stanford, Illinois, 1895-1898; Head Teacher of Mathematics in High School, Champaign, Illinois, 1900-1901; Principal of High School, Urbana, Illinois, 1901-1903; Assistant in Soil Physics, College of Agriculture and Agricultural Experiment Station, University of Illinois, 1903-1905; Instructor in Soil Physics, College of Agriculture, and First Assistant in Soil Physics, Agricultural Ex-

---

†On leave of absence, 1909-1910.

periment Station, University of Illinois, 1905-1908; present position since 1908.

**FRANCIS J. HAYNES, Associate Professor of Music.**

Graduated in vocal music from Hillsdale College, Michigan; Pupil of Mariscalchi; taught at various times in Western Reserve Seminary, West Farrington, Ohio; Bartell College of Music, Warren, Ohio; Streator Conservatory of Music, Streator, Illinois, and Michigan State Industrial School, Lansing, Michigan; Instructor in Vocal Music and Band Leader in South Dakota Agricultural College, 1906-1908; present position since 1908.

**JOSEPH NEWTON RODEHEAVER, A. M., Ph. D., Professor of Philosophy and Education.**

B. S., Ohio Wesleyan University, 1901; A. M., Ohio Wesleyan University, 1902; Instructor in Philosophy and English, Ohio Wesleyan University, 1901-1903; Fellow in Psychology, Clark University, Worcester, Massachusetts, 1903-1904; Student in Philosophy, Graduate School, Boston University, 1904-1905; Acting Professor of English and Logic, Middlebury, Vermont, College, 1905-1906; Instructor in Logic, School of Expression, Boston, 1906-1907; Ph. D., Boston University, 1907; Instructor in Psychology and Public Speaking, Wabash College, 1907-1908; present position since 1908.

**EDWARD R. CHRISMAN, Captain 16th U. S. Infantry, Professor of Military Science and Tactics.**

U. S. M. A., 1884-1888; Second Lieutenant U. S. A., 1888; First Lieutenant, 1895; Captain, 1899; Sioux Indian Campaign, 1890-1891; Santiago Campaign, 1898; Philippine Insurrection, 1899-1902; Philippines, 1906-1907; Professor of Military Science and Tactics, University of Idaho, 1894-1898, 1902-1905; Adjunct Professor of Mathematics, University of Idaho, 1896-1898; present position since 1909.

**J. V. BOPP, B. S., Associate Professor of Agronomy.**

B. S., University of Illinois, 1908; Illinois State Soil Survey, 1906-1907; Instructor in Agronomy, South Dakota State College, 1908-1909; present position since 1909.

**BYRON BRIGGS BRACKETT, A. M., Ph. D., Professor of Electrical Engineering.**

A. B., Syracuse University, 1890; A. M., Syracuse University, 1893; Certificate of Proficiency in Electrical Engineering, Johns Hopkins University, 1895; Ph. D., Johns Hopkins University 1897; Teacher of Mathematics, Dickinson Seminary, Williamsport, Pa., 1890-1892; Teacher of Higher Mathematics and Mechanical Drawing, Collegiate Department of Adelphi Academy, Brooklyn, N. Y., 1892-1893; Student-Instructor, Electrical Engineering Department of Johns Hopkins University, 1894-1897; Instructor in Electrical Engineering, Union College, 1897-1898; Teacher of Physics, Eastern High School, Washington, D. C., 1898-1900; Instructor in Electrical Sci-

ence, Rutgers College, 1901-1903; Professor of Physics and Electrical Engineering, Clarkson School of Technology, 1903-1908; Professor of Electrical Engineering, Clarkson School of Technology, 1908-1909; Inspector of Torpedo Cable for U. S. Army, summer of 1898; Electrical Engineer for Rowland Telegraphic Company, Baltimore, Md., 1900-1901; present position since 1909.

**NOLA K. FROMME, B. S., Assistant Principal, School of Agriculture.**

B. S. in Domestic Science, Ohio State University, 1905. Instructor in Home Economics, South Dakota State College of Agriculture and Mechanic Arts, 1907-1909; present position since 1909.

**HARRY C. SEVERIN, B. A., M. A., Professor of Entomology and Nature Study.**

B. A., University of Wisconsin, 1906; M. A., Ohio University, 1908; Fellowship in Zoology and Entomology, Ohio State University, 1908-1909; Assistant to State Entomologist, Illinois, summer of 1909; present position since 1909.

---

## Instructors and Assistants

---

**HOWARD H. HOY, B. S., M. S., Instructor in Physics and Electrical Engineering.**

B. S., South Dakota Agricultural College, 1896; M. S., South Dakota Agricultural College, 1903; pursued special work in electrical engineering in the Universities of Nebraska and Wisconsin; Instructor in Mechanical and Electrical Engineering, South Dakota Agricultural College, 1899-1904; present position since 1904.

**MAUD GODDARD, Instructor in Industrial Art.**

Student Art Institute, Chicago, 1903; Student Summer Course, School of Fine Arts, Minneapolis, 1907; present position since 1903.

**ARTHUR EDWIN KOCH, B. S., M. S., Assistant in Chemistry.**

Ph. G., South Dakota Agricultural College, 1904; B. S., South Dakota Agricultural College, 1906; M. S., South Dakota State College, 1908; present position since 1906.

**CARL CHRISTENSEN, Instructor in Violin and Other Instruments.**

Studied with Professor Christian Madsen, of Copenhagen, Denmark; since coming to America has studied under several noted instructors, the most notable being Mr. C. F. Toenniges, of Davenport, Iowa, he being a pupil of Theodore Spiering, of Chicago; studied under Mr. Alfred Speil, Minneapolis, 1908-1909; present position since 1906.



**CARRIE LOUISE PHILLIPS, B. S., M. S., Assistant Librarian.**

B. S., South Dakota Agricultural College, 1901; M. S., South Dakota Agricultural College, 1905; present position since 1906.

**GERTRUDE S. YOUNG, A. B., Instructor in Preparatory Department.**

A. B., University of Wisconsin, 1906; present position since 1907.

**ROBERTSON COOK, M. E., Instructor in Mechanical and Steam Engineering.**

M. E., University of Minnesota, 1902; Assistant Instructor in Mechanical Engineering, University of Minnesota, 1903; Engineer with Oliver Iron Mining Company, Duluth, Minnesota, 1904; Mechanical Engineer for the Western Lime and Cement Company, Milwaukee, Wisconsin, 1904-1908; present position since 1908.

**LINDSEY W. WHITEHEAD, B. S., Instructor in Mathematics.**

B. S., South Dakota State College, 1908; present position since 1908.

**BENJAMIN H. ALTON, B. S., Instructor in Zoology and Bacteriology.**

B. S., South Dakota State College, 1908; Member of the Woods Hole Marine Biological Laboratory, Summer of 1908; present position since 1908.

**T. HERBERT LUND, Instructor in Dairy Husbandry.**

Student at Ontario Agricultural College, Guelph, Canada, 1902-1905; Student-Instructor at Ames, Iowa, 1905-1906; Manager George Creamery Company, George, Iowa, 1906-1907; Investigation of British Dairy Markets, Summer of 1907; Special Advanced Dairy Student, Madison, Wisconsin, 1907-1908; present position since 1908.

**JASON M. SAUNDERSON, A. B., Director of Athletics.**

A. B., Albion College, 1908; Physical Training, Detroit Athletic Club, 1907; Physical Training Classes, Albion College, 1907-1908; present position since 1908.

**R. ADAMS DUTCHER, B. S., Assistant in Chemistry.**

B. S., South Dakota State College, 1907; present position since 1908.

**\*H. J. BESLEY, A. B., Assistant in Agronomy.**

A. B., University of Wisconsin, 1908; with Chicago Telephone Company, on underground construction work from Chicago to Milwaukee, 1906; Assistant Chemist at Iron Mine of Colorado Fuel and Iron Company, Sunrise, Wyoming, 1907; Assistant in Agronomy, South Dakota State College, 1908-1910; resigned January 7, 1910.

---

\*Resigned during the year.



**AMY KELLY, B. S., Instructor in the School of Agriculture.**

B. S., South Dakota State College, 1908; Graduate work at Illinois University, 1908-1909; Dietitian at Passarant Hospital, Jacksonville, Ill., June to November, 1909; present position since 1909.

**ORLAND E. WHITE, B. S., Assistant in Botany.**

B. S., South Dakota State College, 1909; present position since 1909.

**RUTH MARIAN WESTCOTT, B. S., Instructor in Piano.**

B. S., South Dakota State College, 1907; Graduate American Conservatory of Music, Chicago, 1909; present position since 1909.

**\*H. B. POTTER, B. S., Instructor in Agronomy.**

B. S., Purdue University, 1909. Instructor in Agronomy, South Dakota State College, 1909; resigned February 1, 1910.

**BONNIE FLORENCE ANDREWS, A. B., M. A., Assistant in English.**

A. B., University of Minnesota, 1903; A. M., University of Minnesota, 1909; Principal of High School, Sisseton, S. D., 1903-1909; Student in Graduate School of the University of Minnesota, 1908-1909; present position since 1909.

**GRACE F. SMILEY, B. S., Instructor in Home Economics.**

B. S., Ohio State University, 1909; present position since 1909.

**\*LEROY MILLER, B. S., Assistant in Dairy Husbandry.**

B. S., Iowa State University, Iowa City, Iowa; dairy researchman at the South Dakota State College 1909; resigned February 1, 1910.

**P. H. MOORE, Assistant in Agronomy.**

Studied at Nova Scotia Agricultural College, Truro, Nova Scotia, Associate Diploma, 1905-1907; engaged by the Nova Scotia Government between college years on field experimental work in Agronomy; studied at Ontario Agricultural College, Guelph, Ontario, 1907-1909; engaged by the Agronomy Department, Ontario Agricultural College, during 1908; Member of the Agronomy Staff, Ontario Agricultural College, April 1st, 1909; present position since July 1st, 1909.

**W. D. GRIGGS, B. S., Assistant in Agronomy.**

B. S., Purdue University; present position since 1909.

**BENJAMIN LEE THOMPSON, B. Sc., Instructor in Animal Husbandry.**

B. Sc. in Agriculture, Ohio State University, 1908; Professor in Animal Husbandry and Dairying, Dunn County School of Agriculture, Menominee, Wis., 1908-1909; present position since 1909.

**SAMUEL GARVER, B. S. A., Assistant in Agronomy.**

B. S. A., Iowa State College, 1909; present position since 1909.

---

\*Resigned during the year.

**JOHNSON SARVIS, B. S., Assistant in Botany.**

B. S., South Dakota State College, 1909; present position since 1909.

**WILLIAM WHITE, B. S. A., Instructor in Dairy Husbandry.**

B. S. A., University of Minnesota, 1908; Student-Instructor in Farm Dairying, University of Minnesota, 1906-1907; Special Student in Dairy Husbandry, University of Wisconsin, 1907-1908; Buttermaker for Spring Lake Butter and Cheese Co., Spring Lake, Wis., 1908; Buttermaker and Manager of Milk and Butter Department of Calumet Dairy Co., Chilton, Wis., 1909; present position since January, 1910.

---

**Other Officers and Employes**

---

- R. A. Larson.....Secretary  
Mary I. Grove.....Registrar  
Nina A. Waters.....Matron of Dormitory
- 

- R. O. Wilson.....Secretary to the President  
Benjamin Lawshe.....Station Stenographer  
George E. Purdy.....Janitor and Carpenter  
Fred R. Betkey.....Engineer  
Fred C. Stoltenberg.....Florist

## Members of Station Council

---

A. J. Norby.....	Member Regents' Committee for the College
A. E. Hitchcock...	Member Regents' Committee for the College
Robert L. Slagle.....	President of the College
James W. Wilson.....	Director and Animal Husbandman
Niels E. Hansen.....	Vice Director and Horticulturist
James H. Shepard.....	Chemist
Edward L. Moore.....	Veterinarian
Edgar W. Olive.....	Botanist
Christian Larsen.....	Dairy Husbandman
Clifford Willis.....	Agronomist

## General Information

---

### A--Historical

1. **ESTABLISHMENT.** An act of Congress approved July 2, 1862, gave to each state 30,000 acres of public lands for each representative in Congress towards "the endowment, support and maintenance of at least one college, where the leading object shall be, without excluding other scientific and classical studies, and including military tactics, to teach such branches of learning as are related to agriculture and mechanic arts." In compliance with this act the territorial legislature of 1881 passed an act establishing an agricultural college at Brookings, in the Territory of Dakota.

The legislature of 1883 provided for the erection of the first building. This building, now known as the Central Building, was built in 1884.

Upon the division of the Territory of Dakota into the States of North and South Dakota when they were admitted into the Union in 1889, the Agricultural and Mechanical College of Dakota became known as the South Dakota Agricultural College.

2. **PURPOSE.** The College is devoted to advancing the interests of practical education, its purpose being to give men and women such training as will best fit them for the active duties of life, whether it be in the fields, the shop, the house, or in the class or counting rooms.

In the act of the legislature establishing the institution it was designated "The Agricultural and Mechanical College," and in the Congressional act these colleges were spoken of as "Colleges of Agriculture and Mechanic Arts." In order that the name may more nearly conform to the object for which the College was established the legislature of 1907 changed it to "The State College of Agriculture and Mechanic Arts."



It is the policy of the institution to make itself a part of the common school system; first, by continuing the work of the young people from the point in their education where the lower school stops, thus giving them an opportunity to become liberally and practically educated within the boundaries of their own state; second, by assisting in the training of public school teachers, especially in the various sciences.

Although the work of this institution is largely scientific, it is of such diversified character that the student can pursue work along almost any line which his tastes dictate. The aim of all the work offered is to fit young people to occupy ably any positions they may be called upon to fill, and to make better and more intelligent citizens of them.

A constant effort is made to reach the masses of the people in the state and interest them in the application of science to industrial pursuits, and in the more general improvement of their home life and every day activities.

3. LOCATION. The College is located upon an eminence one mile from the business center of the city of Brookings, and four miles from the Big Sioux River. Brookings is situated on the Central Dakota Division of the Chicago and North-Western Railway, the Watertown branch of the same road making connection with the main line at this point. It has a population of about three thousand five hundred thrifty, intelligent and hospitable people. The city is lighted by electricity and has a complete water and sewer system.

The streets are lined with trees and there are very few houses without well kept lawns, upon which are growing trees, beautiful flowering shrubs and plants. It has often been called the City of Homes.

It is a city of clean morals. No saloon has been allowed within its limits for several years. In the spring election of 1898 the proposition to allow saloons within the city limits was defeated by a vote of three to one, and in the general election of 1896 Brookings County was the banner county of the state in its vote against allowing intoxicating liquors to be sold in the state.

4. SOURCES OF INCOME. By the congressional act under which South Dakota became a state, one hundred and sixty

thousand acres of land were set aside as an endowment for the South Dakota College of Agriculture and Mechanic Arts. These lands have all been selected; very little has yet been sold. A small amount is now being received yearly as rental from the selected lands.

No school lands can be sold for less than ten dollars per acre, so that these lands, when sold, will probably yield an endowment of two million dollars, the interest from which will be sufficient for the needs of the College.

The Morrill Act passed by Congress in 1890 provides a yearly appropriation for "the more complete endowment and support of colleges for the benefit of agriculture and mechanic arts." Under this act the College now receives from the general government the sum of \$25,000 per annum.

An act making appropriation for the Department of Agriculture, approved March 4, 1907, makes provision for the further endowment and support of these colleges. The bill, which was introduced by Senator Knute Nelson of Minnesota, stipulates that the expenditure of the fund shall be governed in all respects by the provisions of the Morrill Act, and also that a portion of the money may be used to provide for the training of instructors in agriculture and mechanic arts. This act made an appropriation of \$5,000 for the year 1907-1908, which is increased \$5,000 each year until it reaches \$25,000 per annum.

The College also receives aid from the State, biennial appropriations being made by the legislature for maintenance and buildings.

5. EXPERIMENT STATION. This department was organized under the Hatch Act, of Congress, which provides for the establishment of agricultural experiment stations in connection with agricultural colleges, and allows \$15,000 per year for the maintenance of the same. "It shall be the object and duty of said experiment stations to conduct original researches, and verify experiments on the physiology of plants and animals,"—here some twenty other lines of research are enumerated—"and such other experiments bearing directly on the agricultural industry of the United States as may in each case be deemed advisable, having due regard to the varying conditions and needs of the respective states; to aid in acquiring and diffusing among the

people of the United States useful and practical information on the subjects connected with agriculture." The South Dakota station conducts its investigations principally upon the following lines: live stock, soil, field experiments, greenhouse work, trees and small fruits, chemistry of plant growth and foods, economic botany, entomology and zoology.

The Adams Act passed by Congress in 1906, increases the annual appropriation to agricultural experiment stations. This act carried an appropriation of \$5,000 for the first year and increases it \$2,000 each year until it reaches \$15,000 per annum. The first appropriation under this act became available July 1st, 1906.

In planning the work of the station the main object sought is to assist the agricultural interests of the state. Education is derived from this in two ways: first, from the students' observation of the actual work; second, by reading the accounts and results of the work which are published in the form of bulletins and are available to anyone applying.

In order that the experiment work of the station may meet the needs of the different sections of the state where varying conditions prevail, several sub-stations have been established. Such work is now being carried on at Highmore, Eureka and Cottonwood.

---

## B--Equipment

1. CAMPUS. The college campus of thirty acres is beautifully located on an eminence within the corporate limits of Brookings. It is ornamented with choice and tasteful varieties of trees and shrubs and laid out with necessary drives and walks. Adjoining on the rear is a fifty-acre plat which is devoted to horticultural gardens and the United States forestry experiments. This portion is laid out regularly in suitably sized plats with longitudinal streets at appropriate distances apart, thus giving a beautiful and symmetrical effect when viewed from the college buildings.

2. BUILDINGS. The oldest building on the campus, a three-story brick structure called the Central Building, was completed



in 1885, and is devoted to administrative and instructional purposes. The Station Building, also a three-story building, is occupied principally by the experiment station laboratories. The North Building is a four-story brick building, the first floor of which is used as a chapel room, the two floors above furnishing quarters for the art and domestic science departments. The Chemistry and Pharmacy Building, the Drill Hall and the Creamery are all two-story buildings of modern design, and well equipped with apparatus.

The Engineering and Physics Building, the Plant Breeding Building and the Greenhouse, add much to the beauty of the campus, and furnish ample room for the departments which occupy them. Class rooms and fine laboratories are provided in the barn for work in soil physics, agriculture and allied subjects.

A splendid brick dormitory for young women has recently been completed on a site just across the street from the campus.

The central heating and electric light plant occupies a brick structure back of the main building.

3. FARM. Set apart as the college farm is a tract of four hundred and eighty acres near the campus, about sixty acres of which are used by the Agricultural Experiment Station as an experimental farm. Here the field experiments with field crops, seed germination and soil preparation are conducted, and the student can witness and actually participate in this scientific work. The remainder of the farm is used as a model stock and dairy farm under the direction of the professor of animal husbandry. Practical work and experiments involving the best farming practices for this region are given the students.

4. LABORATORIES. The work of the institution being so largely scientific in nature, well-fitted laboratories have been provided in all those departments where their use is made necessary by the most modern and approved educational methods. The farm with its equipment, together with the horticultural gardens and greenhouse, serves as a laboratory for the departments of horticulture and agriculture.

5. MUSEUMS. The idea that museums are valuable in affording illustrative material for study has obtained in the collection of the various specimens and in their arrangement in the



several department museums. The zoological, botanical, geological, art and engineering departments have made especially good beginnings in getting together material for that purpose. Constant additions are being made, thereby increasing their worth as adjuncts to laboratory work. The different collections are kept in the departments to which they belong.

6. LIBRARY AND READING ROOM. The library, occupying rooms on the first floor of the Central Building, contains over 10,000 bound volumes and about 6,000 pamphlets. The institution is a repository for the government and contains a set of government publications dating from 1886. Many of the more valuable sets have been extended to an earlier date. Care has been exercised in the selection of books, in order that each department may have proper reference books at the disposal of the students. The books are arranged according to the Dewey system of classification and are completely catalogued in the card catalogue. The library also receives the cards from the government, cataloguing the bulletins of the experiment stations and the publications of the United States Department of Agriculture. The files of many standard scientific and literary periodicals are kept bound. The reading room is abundantly supplied with current periodicals and newspapers. The library is open nearly all the time, day and evening, and at the disposal of students for the purpose of study and reading. Someone is in charge at all times to give help and information to those using the library.

7. GYMNASIUM AND ATHLETIC GROUNDS. The lower floor of the gymnasium affords room for the training of the girls in physical culture; the upper floor is devoted to the athletic training and military drill of the boys during the months when the weather is too rigorous for such work to be done outside. In connection with the gymnasium a tract of land near the college buildings is used as a place for holding outdoor exercise and sports of an athletic character.

8. DORMITORY. Originally the institution provided dormitories for both sexes. But the attendance increased so that it was necessary to convert the dormitories into rooms for the departments. For a period of years no living arrangements in connection with the College were provided; but increased difficulty

in securing rooms in the city induced the legislature of 1907 to make an appropriation of \$50,000 for a dormitory for the young ladies. This building was completed in the fall of 1908. For particulars concerning board in the dormitory, see paragraph 4 under "D."

9. **HEATING AND LIGHTING.** The buildings are all heated with steam generated in a central heating plant. This plant also furnishes steam for running the machinery in the shops and for generating electricity for lighting the buildings on the campus.

10. **POSTAL FACILITIES** The College furnishes first-class postal facilities, the mail of the students being delivered in one of the buildings at convenient times during the day, making it unnecessary for them to walk to the city postoffice.

---

## C--Administration

1. **GOVERNING BOARD.** By an act of the legislature approved March 10, 1897, provision was made for the appointment of the Regents of Education, who should have charge of all the educational institutions of the state.

The law is, "The Governor, by and with the consent of the senate, shall appoint five persons of probity and wisdom from among the best and best known citizens, residents of different portions of the state, none of whom shall reside in the counties in which any of the state educational institutions are located, who shall be designated as the Regents of Education." The terms of office of these regents are each six years, and expire at different times, thus making a continuous body. Vacancies are filled by the Governor during the recesses of the senate. "The board shall organize by electing one of their members president, and by the election of a secretary. Thus qualified and organized they shall have authority to make such rules as are necessary for their own government as a board and shall immediately assume the exclusive control and management of all the educational institutions which are maintained either wholly or in part by the State." Along this line the powers and duties of the regents are defined, among which important ones may be mentioned, to employ or dismiss members of the different

faculties and other agents, to determine the proper number of teachers in said faculties, also their compensation and terms of employment, to establish departments, to settle upon courses of study, to determine the rules to be enacted for the government of students, to decide upon text books to be used, to fix tuition fees, to guard against unwise duplication of departments, to confer degrees, to control the Agricultural Experiment Station, and to promote education among the farmers by providing for institutes; in fact, to make all regulations as to the executive and instructional functions of the educational institutions of the state. The regents govern the College largely through a regents' committee.

2. **FACULTY.** The faculty, consisting of the president and professors, all of whom are elected by the regents, determines in large part the general policy of the College. The professors are heads of the different departments of instruction which they represent and are responsible to the president, who is in charge of all matters of administration. The president, in turn, is responsible to the regents for the whole work of the institution. In order to aid the president in his executive duties, he appoints, at the beginning of each college year, certain faculty committees, which take up such work as may be assigned them by the president and faculty, and thus greatly facilitate the transaction of business and economize the time of the faculty.

3. **STUDENT AFFAIRS.** Students are allowed wide latitude in carrying on affairs which vitally concern themselves, such as athletic, literary, musical and social organizations. The faculty retains an advisory interest in all these matters, and aims to assist the students in every possible way in making these activities especially helpful to the student body as a whole. In the matter of social affairs the faculty is disposed to allow a reasonable amount of time for recreation, and endeavors to contribute as far as possible towards making the students happy and contented.

4. **STUDENTS' LIVING ARRANGEMENTS.** The faculty maintains the right to pass upon the living arrangements of every non-resident student. Residents of the town with whom students are boarding or lodging are requested to co-operate with the faculty in the effort to improve the general condition of the



students by exercising over them a careful supervision and, reporting to the faculty any misconduct on the part of the students which may come to their notice. Upon coming to Brookings students should report at once at the president's office, where they will be furnished all possible information with reference to living arrangements.

5. **STUDENTS' CONDUCT.** The chief end of school life being to obtain thorough mental and moral discipline, it becomes incumbent upon the faculty to make the conditions as far as possible conducive to that attainment. No set regulations are expected to cover every contingency arising, but it is necessary that all students should recognize the fitness and importance of such as are in force, and co-operate in securing their observance. The faculty has the right at any time to pass reasonable rules that they may consider for the welfare of the College. In the absence of any rule applying, the student's own good judgment should suggest the proper procedure.

6. **TUTORING.** Students who have been absent from class or college exercises or who for any other reasons are unable to keep up with the work of their classes will at the suggestion of the head of the department arrange with a regular tutor of that department for assistance.

---

## D--Special Information for Students

1. **TIME TO ENTER.** Students are admitted at any time and assigned to such classes as they are found best fitted to enter, but it is much better to commence at the beginning of the college year. No reduction in college fees is made when the student enters after the beginning of the term, and if a student enters later he will not under any condition be allowed to hold a class back. If a tardy beginning is imperative the student must arrange with a tutor to assist him in bringing up his work, in order that he may go on understandingly and without hindrance to the class.

2. **TERMS AND VACATIONS** The college year is divided into two semesters. The principal vacation of the year occurs in the summer, from the early part of June until the middle of Septem-



ber. College exercises are suspended in time for students to reach home before Christmas day, the holiday recess extending over about two weeks. A spring vacation of one week is also given about the middle of the second semester. For the calendar of the college year see page 3.

3. EXPENSES OF STUDENTS. No young person should be deterred from obtaining a liberal education when such advantages as this college offers can be had at a nominal price. The registration fee is six dollars per semester and is payable at the time of registration. Books and stationery are furnished by the student. A laboratory fee of one or two dollars per semester is charged for the use of each laboratory in which a student takes work.

By action of the regents the tuition and incidental fees and laboratory fees, after having been paid, will in no case be refunded; but music, dormitory and other fees may be refunded at the discretion of the president of the College, if the student is called away before the end of the term or semester by unavoidable causes.

An estimate of the yearly expenses of a student is given below in three grades, viz.:

	Low	Average	Liberal
Tuition and Incidental Fees..\$	12.00	\$ 12.00	\$ 12.00
Board and Room .....	125.00	155.00	160.00
Laundry .....	12.00	15.00	25.00
Books and Stationery .....	15.00	15.00	35.00
Laboratory Fees .....	0.00	3.00	8.00
	<hr/>	<hr/>	<hr/>
	\$ 164.00	\$ 200.00	\$ 240.00

Male students are expected to purchase uniforms, which range in cost from \$12.00 to \$18.00, and female students must furnish themselves with special costumes, which are not necessarily expensive, for use in physical culture.

Every effort is made by the officers of the institution to secure suitable and satisfactory boarding places for students and a special faculty committee has this matter in charge. The new dormitory will provide a large number of young women with comfortable homes at a reasonable cost.

Good rooms can be secured in the city at private houses or hotels for 50 cents per week and upwards. There are also many places where rooms and board can be obtained at reasonable rates. A list of approved available places for boarding or rooming can, at any time, be obtained from the president of the College. The Christian Associations make it a point at all times to assist new students in finding proper living accommodations.

4. DORMITORY. This building, which was completed in the fall of 1908, is 120 by 50 feet in dimensions and three stories in height in addition to basement. In addition to preceptress and other lady teachers, matron and servants, it will provide a home for seventy women students.

Besides the general parlors and reception hall on the first floor, the second floor contains a general sitting room while on the third floor is a recreation hall suitable for parties and plays attended by girls only. Two bath rooms, toilet rooms and lavatories are also on each floor. In addition, each room is provided with a large closet and with stationary wash stand and hot and cold water.

Precautions have been taken to reduce danger from fire to a minimum. It is heated by steam, lighted by electricity and in every respect, has the latest improvements and conveniences.

Each room is provided with two single cots or beds with mattress and pillow, two straight chairs, study table, dresser with mirror, rug and window shades. Bedding, towels and other articles must be provided by the students. Each girl should provide herself with mattress pad, two pairs of pillow cases, three sheets, two pairs of blankets, napkin ring, six towels and a clothes bag.

The basement is provided with a large dining room, kitchen, store rooms, laundry and rooms for the help. Here a boarding club will be conducted under the supervision of an experienced matron. Every effort will be made to provide wholesome fare at minimum cost to the students. The exact cost of board cannot now be stated, but will be about \$3.00 per week. The club will be conducted on the co-operative plan. Payment of board must be made four weeks in advance. At the end of the year any money unexpended will be returned to the students. No deduction for board will be made for less than a week's absence.

Occupants of the building will be entitled to the laundering of a limited number of articles without extra cost.

The cost of rooms in the hall varies from \$12 on the third floor to \$14 on the first floor per semester for each occupant, two in a room. This fee includes both light and heat. It is expected that two young women will occupy a room. But a student desiring to room alone may do so by paying the double rate. Each occupant will be expected to take care of her own room. The room rent is payable in advance.

A student desiring room reserved for her must forward \$2.00 with her application. This will apply on the regular room rent for the semester. In no case will this advance payment be refunded.

5. STUDENT LABOR. There is a limited amount of paid labor about the institution which can be done by students and it is the policy of the regents to give as much work to deserving students as is consistent with the best interests of all. However, no one should expect to earn his entire expenses while at college and doing school work, or be assured of an income in advance from paid labor.

6. SCHOLARSHIPS. The following article from the law defining powers and duties of the regents of education is self-explanatory: "The Regents of Education shall fix all rates of tuition and other fees to be paid by students, but such rates must be the same in all the different institutions. They may receive free of tuition two students appointed by each senator and one by each representative of the state legislature in any one of the institutions under their control, provided that the period for which appointment is made shall expire with the term of office of said senator or representative, and provided that such appointees shall comply with all the rules and requirements of the institution which they desire to enter. No student, however, shall receive any other gratuity whatever." The regents of education make this article operative in the case of this institution.

7. CO-EDUCATION. Recognizing the value of industrial training as a feature of a practical institution for the masses, the College authorities have provided the various shops and laboratories in which the young men of the state may become familiar with the use of the different tools required in the principal



mechanical industries. These special facilities are not confined to the young men, but special departments such as home economics, art and music have been established, so that the young lady students may have opportunities to fit themselves for a keener appreciation of the realities and enjoyments of life in the home, the school room, the store, the office or the factory. The young woman will profit as much by the introduction of rational methods into her education as the young man, and while the shops, studios and laboratories may be used in some instances by the young man, and in others by the young woman, they are all open to both and in most cases students of both sexes will be seen working side by side. Instead of military drill the young lady students are required to take physical culture.

8. **MILITARY REQUIREMENTS.** The national law organizing and endowing these agricultural colleges requires that military science shall form part of the instruction offered. All male students taking regular work in the college are required to do certain work in this department, unless excused because of physical disability or some other grave reason. Certificates of disability should be obtained from the physician whom the College authorities have designated for such work, the College bearing the expense of the examination. For further regulations governing this work see the military department.

9. **PHYSICAL CULTURE.** Physical culture is required of female students twice a week for the first three continuous years of the time they are students in the institution, or until the sophomore year is completed. Students taking physical culture will furnish special costumes for the same as indicated by the instructor. In regard to excuses from physical culture, the same rule holds as in military exercises.

10. **CHAPEL EXERCISES.** Chapel exercises are held on each college day and all students are cordially invited to attend. The exercises on Tuesday usually consist of announcements and an address by some competent person. Attendance on Tuesdays is required of all students.

11. **PUBLIC ENTERTAINMENTS.** In all cases of public entertainments the students taking part are required to submit their exercises beforehand to the officer regularly in charge of such



work and to rehearse before the instructor in elocution at least ten days before the day of public performance, and as often as the instructor may designate.

12. STUDENT ORGANIZATIONS. In the matter of student societies, the faculty allows the greatest freedom consistent with the general welfare. In order that students may not be led into spending too much time on such matters to the neglect of their studies, the faculty have imposed the rule that no student is to hold at the same time more than one of certain offices which may require much time and attention. Among these are the Editor-in-Chief and the Business Manager of the Collegian, the Editor-in-Chief and the Business Manager of the Junior Annual, the Business Manager of the Y. M. C. A. Lecture Course, and the places on the Intercollegiate Debating Team.

13. ATHLETIC ASSOCIATION. Many forms of athletic exercises are practiced and are recommended and encouraged by the officers of the college. Under the auspices of the local organization and a number of college athletic associations of the state, all kinds of athletic sports are practiced and encouraged. The local representatives contest at the "State Meet" once a year for athletic honors. Students should understand, however, that their studies must receive the first consideration; and that the purpose of athletic exercise is to develop gentlemanly and ladylike qualities in those who participate in them.

14. LITERARY SOCIETIES. A generous and fruitful rivalry for college honors exists between these societies, stimulating each to its best efforts. They are an important factor in the students' education and all are strongly advised to become members. All preparatory students are expected to become members of the Franklin society. The work of this society is carried on under the supervision of the head of the preparatory department and is a preparation for college society work. The faculty, realizing the value of society work, has offered a trophy to be competed for by the Athenian and Miltonian Literary Societies. These societies are composed entirely of college students and meet in their respective halls on every Saturday evening.

15. CHRISTIAN ASSOCIATIONS. In the state schools the Young Men's and Young Women's Christian Associations occupy unique positions. They are the only organizations whose primary ob-

ject is the moral development of the student body. Their platforms are broad enough to allow every student of whatever belief, who stands for cleanness and kindness, to affiliate himself or herself with them. The effect of belonging to such organizations in whose membership are represented many beliefs among the students of forty nations, cannot help but be broadening and helpful; and a membership card secures the privileges of membership in every association. The purpose of the associations is to present the value of Christian living to the student and to the state, and to create an atmosphere of good-fellowship among brotherly men and womanly women. The Young Men's Christian Association is personally supervised by a secretary who is engaged to spend a large part of his time at the South Dakota State College. The Young Women's Christian Association is supervised by the state and international college secretaries. If prospective students will write to the Young Men's or Young Women's Christian Association, State College, Brookings, South Dakota, officers of these organizations will be glad to arrange for meeting them at the train and helping to secure boarding and rooming places.

16. ORATORICAL AND DEBATING INTERESTS. These are represented by a board consisting of members of the faculty and students. It is the office of this board to arrange inter-society and intercollegiate contests in oratory and debating. Each year a representative selected in a preliminary contest is sent to the intercollegiate oratorical contest of the state. In order that this contestant may fully represent the college, the faculty has imposed the requirement that those competing for this honor must be pursuing regular work for the Bachelor's degree.

Credit for two hours work during one semester is given those who take part in an intercollegiate debate.

17. OTHER ORGANIZATIONS. Among other organizations may be mentioned the Athletic Association, which concerns itself with the athletic interests of the college; and technical societies, such as the Art Club, Pharmacy Club, Choral Union, Euterpe Society, etc., each occupying its own sphere of influence.

18. STUDENT PUBLICATIONS. "The Industrial Collegian" is a monthly magazine published by the students of the college. It aims not only to be the organ of the student body but a mir-

ror of student life at this institution. The editorial staff is composed of the Editor-in-Chief, a Business Manager, and one member selected by each regularly organized literary society in the College. The Editor-in-Chief and Business Manager are selected by the students who are at the time of such election bona fide subscribers of the paper.

"The Jack Rabbit," an annual published by the junior class, is a good representative and an exponent of college life.

19. GENERAL CONDITIONS OF ADMISSION. The candidate for admission to the College must be at least fourteen years of age and of good moral character. Students applying for entrance to the preparatory department must present evidence that they have completed the work of the public schools as far as the ninth grade, and no one is allowed to pursue the work of the freshman year or higher work until grades in the preparatory years have been obtained.

20. TIME OF ENTRANCE EXAMINATIONS. The first two days of the first semester will be devoted to examining students applying for admission, both to the College and the preparatory department.

21. ENTRANCE CONDITIONS. A student may be admitted to the College without having passed in one or two of his entrance studies. These shall stand against him and must be cleared up within one year after entrance or the student will be required to take the subjects with the regular classes.

22. CREDITS FROM EXAMINATIONS. Students will be allowed to take examinations in any subject offered without being regular members of the class pursuing that subject, if they have standings in all the prerequisites to that subject, provided that the head of the department concerned is convinced that the subject has been covered in a satisfactory manner; and having passed in the subject, students shall receive credit therefor.

23. ADMISSION FROM OTHER INSTITUTIONS. Students will be admitted to the College upon certificates from other reputable institutions, provided that these show that the students were honorably dismissed from those institutions, and have satisfactorily completed the work for which credit is asked. The College reserves the right, however, to cancel grades accepted from



other schools should the student be found deficient in the subjects for which credit is given.

24. SPECIAL STUDENTS. Students of mature years who have passed in the work of the preparatory department may be allowed to pursue special studies if not candidates for a degree, but they must satisfy the faculty that they are qualified to take up the studies desired.

25. SUBJECTS DEFINED. A full subject is one which requires five periods of lecture, recitation or laboratory work per week. The lecture and recitation periods are each one hour, the laboratory periods two hours in length. The nature of a study and the number of periods per week are indicated by the small letters *a* and *b* together with numbers, written immediately after the name, *a* signifying lecture or recitation work, *b*, laboratory work.

26. METHOD OF REGISTRATION. The student should obtain a classification card in the registrar's office upon which is written the names of the subjects to be pursued, according to the rules governing classification. The classification committee of the faculty will furnish all possible assistance in classifying students. New students must also fill out and file with the registrar cards giving desired information concerning themselves. Standings from the public schools or other educational institutions should also be filed with the registrar at this time. Upon receipt of the fees for the term, the secretary of the college stamps the classification card, which is then to be presented to the different instructors under whom work is to be taken for their signatures, and in order that they may also enroll the student in their classes. This card should then be returned to the registrar. In no case should it be retained longer than three days after being issued.

When a student is enrolled in a subject he is expected to attend all the recitations and other appointments in that subject unless he is excused by the classifying officer and has the subject removed from his card.

No student will be allowed to classify for more than twenty hours' work unless an average standing of 85 has been maintained in the work of the preceding semester, nor for less than fifteen hours' work without special permission from the Classi-



fication Committee. Work taken under a tutor must be placed on the classification card the same as regular work, and signed for by the head of the department.

No senior who has at the beginning of the second semester more than four full subjects or their equivalent to complete for graduation will be allowed to complete the work and graduate at the end of the year.

27. GRADES. All grades are reported to the registrar in numbers on a scale of 100 as perfect. Grades are reported to students in classes as follows: Class "A," representing grades between 90 and 100. Class "B" from 80 to 90. Class "C" from 70 to 80. Classes "D" and "F" for all grades below 70. Students having a term grade of "A" may not be required to take final examination with their class. Grade "D" indicates that the student is conditioned, and may make up the work under a tutor, providing that this is done before the subject is again offered. "F" indicates that the subject in question must be repeated with a regular class before a passing grade is obtained.

In determining a final grade ordinarily twice the recitation grade is added to the final examination grade and one third of the sum is the "final grade." Large latitude is given the teacher, especially in the more advanced work, in the determination of the students' final grades.

28. CONDITIONED STUDENTS. Any student who without good reason has failed to receive a passing grade in more than one full subject of the previous semester's work will be registered only conditionally for further work. And if any student at any time is not carrying the work in which he is classified at a passing grade, or fails to perform other duties which may be expected of him, he may be placed upon the conditioned list and thus debarred from certain student privileges.

29. ATTENDANCE AND DISMISSAL. Students are expected to attend regularly all the exercises of the classes to which they are assigned. When a student finds it necessary to be absent he should get an excuse in advance, if possible. Otherwise he should present an excuse to the committee having this matter in charge at the time and place they may designate. Excuses will be granted only when the absence seems necessary, and such penalties will be imposed upon students for unexcused absences

as the faculty may deem proper. Should a student find it necessary to be late to his class he should make a satisfactory explanation at the close of the period to his instructor, otherwise the tardiness will be marked unexcused. Three unexcused tardinesses will count as an unexcused absence.

All omitted work must be made up within two weeks after return to college duties, unless the health of the student requires a longer period. This omitted work must be made up according to the direction of the instructor and at times designated by him or the tutor in charge of same. Should a student find it necessary to sever his connection with the institution before his work is completed at any time during the semester, he should report to the president his reasons and secure an honorable dismissal; otherwise no standings will be entered in the records giving him credit for the work done during the semester.

30. CHARGES FOR TUTORING. The charges which tutors are allowed to make for giving instruction are graded according to the nature of the work and the number of students taking work together and for single periods, the maximum length of which is one hour, and are shown by the following scheme:

Number of Students	1	2	3	4	5	Six or more
First year preparatory subjects....	15c	25c	35c	40c	45c	50c
Second, third and fourth year preparatory subjects .....	20c	30c	40c	45c	50c	55c
Freshman and sophomore subjects..	25c	35c	45c	50c	55c	60c
Junior and senior subjects.....	30c	40c	50c	55c	60c	65c

In the absence of instruction from the teacher as to the time a student should spend with a tutor in making up work, the tutor should see that the student covers the work which the teacher has assigned.

Students will be held responsible by the faculty for the payment of tutor fees. These must be paid to the respective heads of departments who will hand the same over to the tutors as soon as satisfactory reports concerning the work done have been received from the latter.

A student will not be allowed to take work under a tutor unless the subject in which he is doing the work is on the student's card at the time he is doing it.

Should a student be absent from an appointment which has been made with a tutor, he shall be required to pay the same fee as if he had been present.

31. DEGREES. The courses of study leading to degrees given by this institution are outlined on the following pages and are as follows:

The two years Pharmacy course leading to the degree of Pharmacy Graduate, (Ph. G.).

The four years course in Agriculture, in which the student may elect work along the line of Animal Husbandry, Dairy Husbandry, Agronomy, Horticulture, Veterinary Medicine, Chemistry or Botany. Upon the completion of one of these schemes, under the direction of the head of the department in which the group of electives is chosen the student will receive the degree of Bachelor of Science, (B. S.).

The courses in Mechanical, Electrical and Civil Engineering, each of four years, and leading to the degree of Bachelor of Science, (B. S.). In order to meet a constantly increasing demand for better equipped, and more thoroughly trained men along the several lines of engineering activities, an additional fifth year course of study is offered in the three engineering departments. Upon the completion of this additional year's work, the advanced degree, Mechanical Engineer, (M. E.), Electrical Engineer, (E. E.), or Civil Engineer, (C. E.), will be conferred. This work is nearly all prescribed and is a continuation of the work pursued in the undergraduate courses, and is intended more fully to equip the student with special training along the particular line of work which he desires to pursue after leaving college.

The advanced degree of Master of Science, (M. S.), will be conferred upon students who complete the appropriate undergraduate course in any of the above lines of study and an additional amount of work equal to ten five-hour subjects to be chosen along appropriate lines and in not more than two departments, in each of which credit for at least four collegiate five-hour subjects has already been obtained, the advanced work to be done as prescribed by the faculty. Six or more of the subjects, constituting the "major," must be chosen from one depart-



ment. At least one year of this work must be done while in residence.

32. **SPECIAL COURSES.** The College also offers special courses in several important and practical lines of work. These are mentioned in connection with the departments principally concerned or in the description of the special short industrial courses, and are as follows:

Three years' course in the School of Agriculture.

Two years' work in pharmacy.

One year's work in business branches.

One year's work in amanuensis branches.

Five month's work in steam engineering.

Three months' creamery course.

Thirteen week's work in domestic science.

Special work in vocal and instrumental music.

Special work in art.

Lectures on poultry husbandry, corn judging and stock judging, two weeks.

33. **SCHEMES OF STUDY.** The work leading to a Bachelor's degree may be done according to any one of the schemes mapped out on the following pages. Through these the work of the College is adapted to different classes of students. The entrance requirements to each of these is the work of the preparatory course.

The notation immediately after the name of a subject indicates its nature and the number of times it occurs a week, *a* referring to the class work, and *b* to the laboratory exercises. A department will not be required to give an elective unless at least five students are registered for the subject.

---

## AGRICULTURE

---

### FRESHMAN YEAR

#### First Semester—

Rhetoric, a 3	English	9
Elementary Logic, a 2	Philosophy	1
Elementary Chemistry, a & b 5	Chemistry	1



---

Stock Judging, a 4.....	Animal Husbandry	1
Plane Trigonometry, a 2.....	Mathematics	9
Military Tactics, 3.....		
Elective, a 4.....		
French, a 4.....	French	1
German, a 4.....	German	1

**Second Semester—**

Rhetoric, a 3.....	English	10
Elementary Logic, a 2.....	Philosophy	2
Elementary Chemistry, a & b 5.....	Chemistry	2
Principles of Animal Breeding, a 3.....	Animal Husbandry	4
Surveying, b 2.....	Civil Engineering	2
Military Tactics, 3.....		
Elective, a 4.....		
French, a 4.....	French	2
German, a 4.....	German	2

**SOPHOMORE YEAR****First Semester—**

General Botany, a 2, b 3.....	Botany	1
General Horticulture, b 1.....	Horticulture	1
Farm Crops, a & b 5.....	Agronomy	1
Quantitative Chemistry, a & b 5.....	Chemistry	3
Military Tactics, 3.....		
Elective, a 4.....		
French, a 4.....	French	3
German, a 4.....	German	3

**Second Semester—**

General Botany, a 2, b 3.....	Botany	2
General Horticulture, b 1.....	Horticulture	2
Farm Dairying, a 2, b 1.....	Dairy Husbandry	1
Elements of Military Science, a 1.....	Military Science	1
Military Tactics, 3.....		
Elective, a & b 10.....		
French, a 4, or.....	French	4
German, a 4.....	German	4

And six hours to be selected from one of the groups.

**JUNIOR YEAR****First Semester—**

General Zoology, a 2, b 3.....	Zoology	2
Entomology, a & b 2.....	Entomology	3
Soils, a & b 5.....	Agronomy	4
Psychology, a 3.....	Philosophy	3
Elective, a & b 5.....		

To be selected from one of the groups.

**Second Semester—**

General Zoology, a 2, b 3.....	Zoology	3
Entomology, a & b 4.....	Entomology	4
Soils, a & b 5.....	Agronomy	5
Electives, a & b 6.....		

To be selected from one of the groups.

**SENIOR YEAR****First Semester—**

Geology, a 5.....	Agronomy	9
Economics, a 3.....	History	15
Elective, a & b 10.....		

To be selected from one of the groups.

**Second Semester—**

Genetics, a 3.....	Horticulture	7
Ethics, a 3.....	Philosophy	4
Elective, a & b 12.....		

To be selected from one of the groups.

---

## Elective Groups of Agriculture Course

---

**Animal Husbandry Group****SOPHOMORE YEAR****Second Semester—**

Horse Shoeing, a 2.....	Veterinary	1
Breeds of Live Stock, a 4.....	Animal Husbandry	2

**JUNIOR YEAR****First Semester—**

Advanced Stock Judging, a 2.....	Animal Husbandry	3
Animal Nutrition, a 3.....	Animal Husbandry	5

**Second Semester—**

Agricultural Chemistry, a 3.....	Chemistry	6
Forage Crops, a 3.....	Agronomy	3
Forestry, a 2.....	Horticulture	4

**SENIOR YEAR****First Semester—**

Stock Feeding and Management, a 2.....	Animal Husbandry	6
Veterinary Medicine, a 5.....	Veterinary	4
Bacteriology, a & b 5.....	Veterinary	6
Public Speaking, a 3.....	Philosophy	7
History of Education, a 3.....	Philosophy	5

**Second Semester—**

Stock Feeding and Management, a 3.....	Animal Husbandry	7
Veterinary Medicine, a 5.....	Veterinary	5
Farm Machinery, a & b 3.....	Agronomy	8
Principles of Education, a 3.....	Philosophy	6
Concrete Construction for Agricultural Purposes, a 3		
.....	Agronomy	13
Public Speaking, a 2.....	Philosophy	8

**Dairy Husbandry Group**  
**SOPHOMORE YEAR**

**Second Semester—**

Inspection and Testing of Dairy Products, a & b 4		
.....	Dairy Husbandry	2
Farm Machinery, a & b 3, or.....	Agronomy	8
Landscape Gardening, b 2, or.....	Horticulture	6
English Literature, a 3, or.....	English 12 or 14 or	16
Farm Crops, a 3.....	Agronomy	3

**JUNIOR YEAR****First Semester—**

Factory Operation (Creamery), a & b 5....	Dairy Husbandry	4
---	-----------------	---

**Second Semester—**

Factory Operation (Cheese), a & b 5.....	Dairy Husbandry	5
Forestry, a 2, or.....	Horticulture	4
Sociology, a 3, or.....	History	16
English Literature, a 3.....	English 12 or 14 or	16

**SENIOR YEAR****First Semester—**

Dairy Management, a & b 3.....	Dairy Husbandry	6
Dairy Bacteriology, a & b 3.....	Dairy Husbandry	3
Veterinary Medicine, a 5 or.....	Veterinary	4
Agricultural and Sanitary Analysis, a & b 5 or....	Chemistry	5
Cytology and Botanical Methods, a 1, b 4 or.....	Botany	8
History of Education, a 3, or.....	Philosophy	5
Mycology and Plant Pathology, b 2, or.....	Botany	5
English Literature, a 3, or.....	English 11 or 13 or	15
Animal Nutrition, a 3.....	Animal Husbandry	5

**Second Semester—**

Dairy Technology, a 2.....	Dairy Husbandry	7
Dairy Research, a 5.....	Dairy Husbandry	8
Chemistry of Foods and Nutrition, a & b 5, or....	Chemistry	4
Agricultural Chemistry, a 3, or.....	Chemistry	6
Veterinary Medicine, a 5, or.....	Veterinary	5
Cytology and Botanical Methods, a 1, b 4, or.....	Botany	9
Principles of Education, a 3, or.....	Philosophy	6
English Literature, a 3.....	English 12 or 14 or	16

**Veterinary Group****SOPHOMORE YEAR****Second Semester—**

Chemistry of Foods and Nutrition, a & b 5.....	Chemistry	4
Horse Shoeing, a 2.....	Veterinary	1

**JUNIOR YEAR****First Semester—**

*General Physics, a 3, b 2.....	Physics	3
Veterinary Anatomy, a & b 5.....	Veterinary	2
Advanced Stock Judging, a 2.....	Animal Husbandry	3
Animal Nutrition, a 3.....	Animal Husbandry	5

**Second Semester—**

*General Physics, a 3, b 2.....	Physics	4
Veterinary Anatomy, a & b 5.....	Veterinary	3
Inspection and Testing of Dairy Products, a & b 4 .....	Dairy Husbandry	2
Veterinary Materia Medica, a 3.....	Pharmacy	10
*To be taken in place of Soils, Agronomy 5 & 6, by students of this group.		

**SENIOR YEAR****First Semester—**

Veterinary Medicine, a 5.....	Veterinary	4
Histology, a & b 5.....	Zoology	8
Bacteriology, a & b 5.....	Veterinary	6
Comparative Anatomy of Vertebrates, a & b 5.....	Zoology	6
History of Education, a 3.....	Philosophy	5

**Second Semester—**

Veterinary Medicine, a 5.....	Veterinary	5
Histology, a & b 5.....	Zoology	9
Comparative Anatomy of Vertebrates, a & b 5.....	Zoology	7
Principles of Education, a 3.....	Philosophy	6

**Agronomy Group****SOPHOMORE YEAR****Second Semester—**

Farm Crops, a & b 5.....	Agronomy	2
Farm Crops, a 3.....	Agronomy	3

**JUNIOR YEAR****First Semester—**

Bacteriology, a & b 5.....	Veterinary	6
----------------------------	------------	---

**Second Semester—**

Farm Machinery, a & b 3.....	Agronomy	8
Taxonomy, a 2, b 3.....	Botany	7



**SENIOR YEAR****First Semester—**

Plant Physiology, a 1, b 2.....	Botany	4
Mycology and Plant Pathology, b 2.....	Botany	5
Soils, a & b 5.....	Agronomy	6
Advanced Farm Crops, a & b 5.....	Agronomy	12
Economic Entomology, a 2.....	Entomology	5
History of Education, a 3.....	Philosophy	5
Investigation and Thesis, a & b 5 to 10.....	Agronomy	14

**Second Semester—**

Soils, a & b 5.....	Agronomy	7
Farm Management, a & b 5.....	Agronomy	11
Economic Entomology, a 2.....	Entomology	6
Concrete Construction for Agricultural Purposes, a & b 3 .....	Agronomy	13
Agricultural Chemistry, a 3.....	Chemistry	6
Principles of Education, a 3.....	Philosophy	6
Investigation and Thesis, a & b 5 to 10.....	Agronomy	15

**Horticulture Group****SOPHOMORE YEAR****Second Semester—**

Floriculture and Market Gardening, a 1, b 1....	Horticulture	3
Forestry, a 2.....	Horticulture	4

**JUNIOR YEAR****First Semester—**

Plant Physiology, a 1, b 2.....	Botany	4
Mycology and Plant Pathology, b 2.....	Botany	5

**Second Semester—**

Farm Machinery, a & b 3.....	Agronomy	8
Taxonomy, a 2, b 3.....	Botany	7
Mycology and Plant Pathology, b 2.....	Botany	6

**SENIOR YEAR****First Semester—**

Economic Entomology, a 2.....	Entomology	5
Systematic Pomology, b 1.....	Horticulture	5
Cytology and Botanical Methods, a 1, b 4.....	Botany	8
History of Education, a 3.....	Philosophy	5

**Second Semester—**

Economic Entomology, a 2.....	Entomology	6
Sociology, a 3.....	History	16
Landscape Gardening, b 2.....	Horticulture	6
Architectural Drawing, b 3.....	Mechanical Engineering	6
Principles of Education, a 3.....	Philosophy	6

**Plant Pathology and Agricultural Botany Group****SOPHOMORE YEAR****Second Semester—**

Economic Botany, a & b 3.....	Botany	3
Farm Machinery, a 3.....	Agronomy	8

**JUNIOR YEAR****First Semester—**

Plant Physiology, a 1, b 2.....	Botany	4
Mycology and Plant Pathology, b 2.....	Botany	5

**Second Semester—**

Taxonomy, a 2, b 3.....	Botany	7
Mycology and Plant Pathology, b 2.....	Botany	6

**SENIOR YEAR****First Semester—**

Cytology and Botanical Methods, a 1, b 4.....	Botany	8
Economic Entomology, a 2.....	Entomology	5
Investigation and Thesis, a & b 3.....	Botany	11
History of Education, a 3.....	Philosophy	5

**Second Semester—**

Cytology and Botanical Methods, a 1, b 4.....	Botany	9
Economic Entomology, a 2.....	Entomology	6
Investigation and Thesis, a & b 5.....	Botany	12
Principles of Education, a 3.....	Philosophy	6

**Chemistry Group****SOPHOMORE YEAR****Second Semester—**

Chemistry of Foods and Nutrition, a & b 5.....	Chemistry	4
Farm Machinery, a & b 3.....	Agronomy	8

**JUNIOR YEAR****First Semester—**

Histology, a & b 5.....	Zoology	8
-------------------------	---------	---

**Second Semester—**

Histology, a & b 5.....	Zoology	9
Volumetric Analysis and Drug Assaying, a & b 5...	Pharmacy	9

**SENIOR YEAR****Second Semester—**

Bacteriology, a & b 5.....	Veterinary	6
Agriculture and Sanitary Analysis, a & b 3.....	Chemistry	5
Industrial Chemistry, a 3.....	Chemistry	7
History of Education, a 3.....	Philosophy	5

**Second Semester—**

Agricultural Chemistry, a 3.....	Chemistry	6
----------------------------------	-----------	---

---

Advanced Chemistry of Foods, a & b 5.....	Chemistry	8
Principles of Education, a 3.....	Philosophy	6

---

## HOME ECONOMICS

---

### FRESHMAN YEAR

#### First Semester—

Rhetoric, a 3.....	English	9
Elementary Logic, a 2.....	Philosophy	1
Elementary Chemistry, a & b 5.....	Chemistry	1
Food and Dietetics, a 4, b 1.....	Home Economics	1
Elective, a 4.....		
French, a 4.....	French	1
German, a 4.....	German	1

#### Second Semester—

Rhetoric, a 3.....	English	10
Elementary Logic, a 2.....	Philosophy	2
Elementary Chemistry, a & b 5.....	Chemistry	2
Sewing, b 3.....	Domestic Art	3
Theory of Design, a 2.....	Art	3
Elective, a 4.....		
French, a 4.....	French	2
German, a 4.....	German	2

### SOPHOMORE YEAR

#### First Semester—

English Literature from Milton to Goldsmith, a 3....	English	11
Quantitative Chemistry, a & b 5.....	Chemistry	3
General Botany, a 2, b 3.....	Botany	1
Sewing, b 2.....	Domestic Art	4
Elective, a 4.....		
French, a 4.....	French	3
German, a 4.....	German	3

#### Second Semester—

English Prose Literature from Johnson to Morley, a 3,	English	12
Chemistry of Foods and Nutrition, a & b 5.....	Chemistry	4
General Botany, a 2, b 3.....	Botany	2
Textiles, a 2.....	Home Economics	2
Elective, a 4.....		
French, a 4.....	French	4
German, a 4.....	German	4

**JUNIOR YEAR****First Semester—**

English Literature, a 3.....	English 13 or 15
History, Medieval, a 3.....	History 7
General Zoology & Physiology, a 2, b 3.....	Zoology 2
Bacteriology, a & b 5.....	Veterinary 6
Psychology, a 3.....	Philosophy 3

**Second Semester—**

English Literature, a 3.....	English 14 or 16
History, Modern, a 3.....	History 8
General Zoology & Physiology, a 2, b 3.....	Zoology 3
Application of Heat to Foods, a 3, b 2.....	Home Economics 3
Ethics, a 3.....	Philosophy 4

**SENIOR YEAR****First Semester—**

Economics, a 3.....	History 15
Art History, a 2.....	Art 6
Household Sanitation, a 3.....	Home Economics 4
Home Nursing and Invalid Cookery, a 3....	Home Economics 5
The House, a 2.....	Home Economics 7
Organization of the Retail Market, a 2....	Home Economics 10
Elective, a 3.....	
English Poetry from 1798 to 1832, a 3.....	English 13
English Literature from Beowulf to Milton, a 3....	English 15
The English Novel, a 3.....	English 17
American History (1783-1829), a 3.....	History 9
Nineteenth Century History, a 2.....	History 11
French, a 3.....	French 5
German, a 3.....	German 5
History of Education, a 3.....	Philosophy 5
Theory of Interpretation and Musical Forms, a 2...	Music 6
History of Music, a 3.....	Music 7
Nature Study, a 3.....	Entomology 11
Plant Physiology, a 1, b 2.....	Botany 4
Mycology and Plant Pathology, b 2.....	Botany 5
Handicraft, b 2.....	Art 4

**Second Semester—**

Sociology, a 3.....	History 16
Astronomy, a 4.....	Mathematics 15
Art History, a 2.....	Art 7
Advanced Work in the Preparation of Food, a 1, b 3	
.....	Home Economics 9
Elective, a 5.....	
English Poetry from 1832, a 3.....	English 14
Shakespeare and the Drama, a 3.....	English 16



American History (1829-1865), a 3.....	History	10
Nineteenth Century History, a 2.....	History	12
French, a 3.....	French	6
German, a 3.....	German	6
Principles of Education, a 3.....	Philosophy	6
Theory of Interpretation and Musical Forms, a 2....	Music	8
History of Music, a 3.....	Music	10
Teaching of Home Economics, a 2.....	Home Economics	8
Economic Botany, a & b 3.....	Botany	3
Taxonomy, a 2, b 3.....	Botany	7
Household Insects, a 2.....	Entomology	9
Bird Life, a & b 2.....	Entomology	12
Handicraft, b 2.....	Art	5

## MECHANICAL ENGINEERING

### FRESHMAN YEAR

#### First Semester—

Rhetoric, a 3.....	English	9
Elementary Logic, a 2.....	Philosophy	1
Solid Geometry, a 3.....	Mathematics	7
Plane Trigonometry, a 2.....	Mathematics	9
Elementary Chemistry, a & b 5.....	Chemistry	1
Mechanical Drawing, b 5.....	Mechanical Engineering	5
Military Tactics, 3.....		

#### Second Semester—

Rhetoric, a 3.....	English	10
Elementary Logic, a 2.....	Philosophy	2
Advanced Algebra, a 3.....	Mathematics	8
Plane and Spherical Trigonometry, a 2.....	Mathematics	10
Elementary Chemistry, a & b 5.....	Chemistry	2
Machine Shop, b 3.....	Mechanical Engineering	3
Surveying, b 2.....	Civil Engineering	2
Military Tactics, 3.....		

### SOPHOMORE YEAR

#### First Semester—

Analytic Geometry and Calculus, a 5.....	Mathematics	11
General Physics, a 3, b 2.....	Physics	3
French, a 4.....	French	1
Machine Shop, b 5.....	Mechanical Engineering	4
Military Tactics, 3.....		

**Second Semester—**

Calculus, a 5.....	Mathematics	12
General Physics, a 3, b 2.....	Physics	4
French, a 4.....	French	2
Descriptive Geometry, a 1, b 2.....	Mechanical Engineering	7
Machine Design, b 2.....	Mechanical Engineering	8
Elements of Military Science, a 1.....	Military	1
Military Tactics, 3.....		

**JUNIOR YEAR****First Semester—**

Machine Design, b 4.....	Mechanical Engineering	9
Elements of Mechanism, a 3.....	Mechanical Engineering	16
Electricity and Magnetism, a 3, b 1....	Electrical Engineering	1
Hydraulics, a 3.....	Civil Engineering	5
Analytic Mechanics, a 5.....	Mathematics	13

**Second Semester—**

Steam Engine and Thermodynamics, a 5		
.....	Mechanical Engineering	12
Mechanics of Materials, a 5.....	Mechanical Engineering	16
Electrical Measurement, b 2.....	Electrical Engineering	2
Dynamo Electrical Machinery, a 3, b 2.	Electrical Engineering	3
Masonry and Foundations, a 2.....	Civil Engineering	9

**SENIOR YEAR****First Semester—**

Gas and Oil Engines, a 2.....	Mechanical Engineering	11
Experimental Engineering, b 3.....	Mechanical Engineering	17
Steam Boilers, a 2.....	Mechanical Engineering	13
Engineering Design, b 5.....	Mechanical Engineering	19
Stresses in Framed Structures, a 3..	Mechanical Engineering	15
Economics, a 3.....	History	15

**Second Semester—**

Experimental Engineering, b 2.....	Mechanical Engineering	18
Structural Design, b 5.....	Mechanical Engineering	20
Contracts and Specifications, a 2.....	Civil Engineering	12
General Astronomy, a 4.....	Mathematics	15
Elective, a 5.....		

**Fifth Year Subjects in Mechanical Engineering****First Semester—**

Alternating Currents, a 3, b 2.....	Electrical Engineering	4
Structural Design, b 3.....	Mechanical Engineering	21

Statics, a 2.....	Mechanical Engineering	24
Thesis, a 2.....	Mechanical Engineering	26
Elective, 5.....		

**Second Semester—**

Kinematics, b 2.....	Mechanical Engineering	14
Structural Engineering, b 2.....	Mechanical Engineering	22
Heating and Ventilation, a 2.....	Mechanical Engineering	25
Thesis, a & b 3.....	Mechanical Engineering	27
Railroad Engineering, a 1, b 2.....	Civil Engineering	13
Elective, 5.....		

Note—All Electives must be taken from the department.

## ELECTRICAL ENGINEERING

### FRESHMAN YEAR

**First Semester—**

Rhetoric, a 3.....	English	9
Elementary Logic, a 2.....	Philosophy	1
Solid Geometry, a 3.....	Mathematics	7
Plane Trigonometry, a 2.....	Mathematics	9
Elementary Chemistry, a & b 5.....	Chemistry	1
Mechanical Drawing, b 5.....	Mechanical Engineering	5
Military Tactics, 3.....		

**Second Semester—**

Rhetoric, a 3.....	English	10
Elementary Logic, a 2.....	Philosophy	2
Advanced Algebra, a 3.....	Mathematics	8
Plane and Spherical Trigonometry, a 2.....	Mathematics	10
Elementary Chemistry, a & b 5.....	Chemistry	2
Machine Shop, b 3.....	Mechanical Engineering	3
Surveying, b 2.....	Civil Engineering	2
Military Tactics, 3.....		

### SOPHOMORE YEAR

**First Semester—**

Analytic Geometry and Calculus, a 5.....	Mathematics	11
General Physics, a 3, b 2.....	Physics	3
French, a 4.....	French	1
Machine Shop, b 5.....	Mechanical Engineering	4
Military Tactics, 3.....		

**Second Semester—**

Calculus, a 5.....	Mathematics	12
General Physics, a 3, b 2.....	Physics	4

---

French, a 4.....	French	2
Descriptive Geometry, a 1, b 2.....	Mechanical Engineering	7
Machine Design, b 2.....	Mechanical Engineering	8
Elements of Military Science, a 1.....	Military	1
Military Tactics, 3.....		

**JUNIOR YEAR****First Semester—**

Electricity and Magnetism, a 3, b 1..	Electrical Engineering	1
Machine Design, b 4.....	Mechanical Engineering	9
Elements of Mechanism, a 3.....	Mechanical Engineering	10
Hydraulics, a 3.....	Civil Engineering	5
Analytic Mechanics, a 5.....	Mathematics	13

**Second Semester—**

Electrical Measurements, b 2.....	Electrical Engineering	2
Dynamo Electric Machinery, a 3, b 2..	Electrical Engineering	3
Steam Engines and Thermodynamics, a 5		
.....	Mechanical Engineering	12
Mechanics of Materials, a 5.....	Mechanical Engineering	16
Masonry and Foundations, a 2.....	Civil Engineering	9

**SENIOR YEAR****First Semester—**

Alternating Currents, a 3, b 2.....	Electrical Engineering	4
Dynamo Design, b 3.....	Electrical Engineering	5
Gas and Oil Engines, a 2.....	Mechanical Engineering	11
Steam Boilers, a 2.....	Mechanical Engineering	13
Experimental Engineering, b 3....	Mechanical Engineering	17
Economics, a 3.....	History	15

**Second Semester—**

Electrical Light and Power Distribution, a 3, b 2		
.....	Electrical Engineering	6
Experimental Engineering, b 2....	Mechanical Engineering	18
Contracts and Specifications, a 2.....	Civil Engineering	12
General Astronomy, a 4.....	Mathematics	15
Elective, 5.....		

---

**Fifth Year Subjects in Electrical Engineering**


---

**First Semester—**

Polyphase Currents, a 3, b 2.....	Electrical Engineering	7
Electrical Design, b 3.....	Electrical Engineering	8
Thesis, a or b 2.....	Electrical Engineering	11



Stresses in Framed Structures, a 3..	Mechanical Engineering	15
Elective, 5.....		

**Second Semester—**

Design of Power Stations, a 2, b 3....	Electrical Engineering	9
Long Distance Transmission, a 2....	Electrical Engineering	10
Thesis, a or b 3.....	Electrical Engineering	12
Railroad Engineering, a 1, b 2.....	Civil Engineering	13
Elective, 5.....		

Note—Electives must be taken in the department.

Special electives in Electrical Engineering subjects will be offered in the senior and fifth years.

## CIVIL ENGINEERING

### FRESHMAN YEAR

**First Semester—**

Rhetoric, a 3.....	English	9
Elementary Logic, a 2.....	Philosophy	1
Solid Geometry, a 3.....	Mathematics	7
Plane Trigonometry, a 2.....	Mathematics	9
Elementary Chemistry, a & b 5.....	Chemistry	1
Mechanical Drawing, b 5.....	Mechanical Engineering	5
Military Tactics, 3.....		

**Second Semester—**

Rhetoric, a 3.....	English	10
Elementary Logic, a 2.....	Philosophy	2
Advanced Algebra, a 3.....	Mathematics	8
Plane and Spherical Trigonometry, a 2.....	Mathematics	10
Elementary Chemistry, a & b 5.....	Chemistry	2
Surveying, a & b 5.....	Civil Engineering	1
Military Tactics, 3.....		

### SOPHOMORE YEAR

**First Semester—**

Analytic Geometry and Calculus, a 5.....	Mathematics	11
General Physics, a 3, b 2.....	Physics	3
French, a 4.....	French	1
Surveying, a 2, b 3.....	Civil Engineering	3
Military Tactics, 3.....		

**Second Semester—**

Descriptive Geometry, a 1, b 2.....	Mechanical Engineering	7
Calculus, a 5.....	Mathematics	12
General Physics, a 3, b 2.....	Physics	4

---

French, a 4.....	French	2
Topographical Surveying, a & b 2.....	Civil Engineering	4
Elements of Military Science, a 1.....	Military	1
Military Tactics, 3.....		

### JUNIOR YEAR

#### First Semester—

Analytic Mechanics, a 5.....	Mathematics	13
Electricity and Magnetism, a 3, b 1...	Electrical Engineering	1
Machine Design, b 4.....	Mechanical Engineering	9
Elements of Mechanism, a 3.....	Mechanical Engineering	10
Hydraulics, a 3.....	Civil Engineering	5

#### Second Semester—

Steam Engines and Thermodynamics, a 5		
.....	Mechanical Engineering	12
Mechanics of Materials, a 5.....	Mechanical Engineering	16
Geodesy, a 3.....	Civil Engineering	6
Water Supply, a 2.....	Civil Engineering	7
Irrigation, a 2.....	Civil Engineering	8
Masonry and Foundations, a 2.....	Civil Engineering	9

### SENIOR YEAR

#### First Semester—

Economics, a 3.....	History	15
Geology, a 5.....	Agromony	9
Steam Boilers, a 2.....	Mechanical Engineering	13
Stresses in Framed Structures, a 3..	Mechanical Engineering	15
Experimental Engineering, b 3.....	Mechanical Engineering	17
Sewerage, a 2.....	Civil Engineering	10
Roads and Pavements, a 2.....	Civil Engineering	11

#### Second Semester—

General Astronomy, a 4.....	Mathematics	15
Experimental Engineering, b 2.....	Mechanical Engineering	18
Contracts and Specifications, a 2.....	Civil Engineering	12
Railroad Engineering, a 3.....	Civil Engineering	13
Dam and Reservoir Design, b 2.....	Civil Engineering	14
Elective, 5.....		

---

## Fifth Year Subjects in Civil Engineering

---

#### First Semester—

Gas and Oil Engines, a 2.....	Mechanical Engineering	11
Structural Design, a 3, b 2.....	Civil Engineering	15

---

Hydraulic Motors, a 3.....	Civil Engineering	17
Reinforced Concrete, a 3.....	Civil Engineering	18
Thesis, a 2.....	Civil Engineering	19
Elective, 3.....		

**Second Semester—**

Dynamo Electric Machinery, a 3, b 2..	Electrical Engineering	3
Kinematics, b 2.....	Mechanical Engineering	14
Structural Design, b 3.....	Civil Engineering	16
Thesis, a & b 3.....	Civil Engineering	20
Elective, 5.....		

Note—Electives must be chosen in the department.

---

## GENERAL SCIENCE

---

**FRESHMAN YEAR****First Semester—**

Rhetoric, a 3.....	English	9
Elementary Logic, a 2.....	Philosophy	1
Elementary Chemistry, a & b 5.....	Chemistry	1
Military Tactics, 3.....		
Elective, 9.....		
French, a 4, or.....	French	1
German, a 4.....	German	1
Food and Dietetics, a 4, b 1, or.....	Home Economics	1
Solid Geometry, a 3, and.....	Mathematics	7
Plane Trigonometry, a 2.....	Mathematics	9

**Second Semester—**

Rhetoric, a 3.....	English	10
Elementary Logic, a 2.....	Philosophy	2
Elementary Chemistry, a & b 5.....	Chemistry	2
Military Tactics, 3.....		
Elective, 9.....		
French, a 4, or.....	French	2
German, a 4.....	German	2
Textiles, a 2, and.....	Home Economics	2
Household Economy, a 3.....	Home Economics	6
Or two of the three following subjects:		
Surveying, b 2.....	Civil Engineering	2
Advanced Algebra, a 3.....	Mathematics	8
Plane and Spherical Trigonometry, a 2.....	Mathematics	10

**SOPHOMORE YEAR****First Semester—**

English Literature from Milton to Goldsmith, a 3....	English	11
Public Speaking, a 3.....	Philosophy	7
Military Tactics, 3.....		
Elective, a & b 14.....		
French, a 4, or.....	French	3
German, a 4, or.....	German	3
And two of the following:		
General Botany, a 2, b 3.....	Botany	1
General Zoology, a 2, b 3.....	Zoology	3
Quantitative Chemistry, a & b 5.....	Chemistry	3
General Physics, a 3, b 2.....	Physics	3
Analytic Geometry and Calculus, a 5.....	Mathematics	11

**Second Semester—**

English Prose Literature from Johnson to Morley, a 3	English	12
Public Speaking, a 2.....	Philosophy	8
Elements of Military Science, a 1.....	Military	1
Military Tactics, 3.....		
Elective, a & b 14.....		
French, a 4, or.....	French	4
German, a 4.....	German	4
And two of the following:		
General Botany, a 2, b 3.....	Botany	2
General Zoology, a 2, b 3.....	Zoology	4
Volumetric Analysis and Drug Assaying, a & b 5		
.....	Pharmacy	9
General Physics, a 3, b 2.....	Physics	4
Calculus, a 5.....	Mathematics	12

**JUNIOR YEAR****First Semester—**

English Literature, a 3.....	English	13 or 15
History, Medieval, a 3.....	History	7
Psychology, a 3.....	Philosophy	3
Elective, a & b 10.....		

**Second Semester—**

English Literature, a 3.....	English	14 or 16
History, Modern, a 3.....	History	8
Ethics, a 3.....	Philosophy	4
Elective, a & b 10.....		

**SENIOR YEAR****First Semester—**

Economics, a 3.....	History	15
Geology, a 5.....	Agronomy	9
Elective, a & b 10.....		



**Second Semester—**

Sociology, a 3.....	History 16
General Astronomy, a 4.....	Mathematics 15
Elective, a & b 10.....	

**Electives of Junior and Senior Years in General Science****First Semester—**

General Botany, a 2, b 3.....	Botany 1
Plant Physiology, a 1, b 2.....	Botany 4
Mycology and Plant Pathology, b 2.....	Botany 5
Cytology and Botanical Methods, a 1, b 4.....	Botany 8
Quantitative Chemistry, a & b 5.....	Chemistry 3
Agricultural and Sanitary Analysis, a & b 5.....	Chemistry 5
Industrial Chemistry, a 3.....	Chemistry 7
General Physics, a 3, b 2.....	Physics 3
Advanced Physics, a 4, b 1.....	Physics 5
Heat, a 3, b 1.....	Physics 7
Entomology, a & b 2.....	Entomology 3
Economic Entomology, a 2.....	Entomology 5
Systematic Entomology, b 2.....	Entomology 7
Nature Study, a 3.....	Entomology 11
Materia Medica, a 5.....	Pharmacy 2
General Zoology, a 2, b 3.....	Zoology 3
Comparative Anatomy of Vertebrates, a & b 5.....	Zoology 7
Histology, a & b 5.....	Zoology 9
Embryology, a & b 5.....	Zoology 11
Bacteriology, a & b 5.....	Veterinary 6
Analytic Geometry & Calculus, a 5.....	Mathematics 11
Analytic Mechanics, a 5.....	Mathematics 13
French, a 3.....	French 5
German, a 3.....	German 5
English Poetry from 1798 to 1832, a 3.....	English 13
English Literature from Beowulf to Milton, a 3.....	English 15
The English Novel, a 3.....	English 17
Biblical History and Literature, a 2.....	English 19
Argumentation, a 3.....	English 21
American History (1783-1829), a 3.....	History 9
Nineteenth Century History, a 2.....	History 11
American Government, a 3.....	History 13
History of Education, a 3.....	Philosophy 5
Theory and Practice of Design, a & b 2.....	Art 4
Art History, a 2.....	Art 6

Theory of Interpretation and Musical Forms, a 2.....	Music	6
History of Music, a 3.....	Music	7
Military Law, a 1.....	Military	2
Field Service Regulations & Military Field Engineering, a 1 .....	Military	4

## Second Semester—

General Botany, a 2, b 3.....	Botany	2
Economic Botany, a & b 3.....	Botany	3
Taxonomy, a 2, b 3.....	Botany	7
Cytology and Botanical Methods, a 1, b 4.....	Botany	9
Volumetric Analysis and Drug Assaying, a & b 5....	Pharmacy	9
Chemistry of Foods and Nutrition, a & b 5.....	Chemistry	4
Agricultural Chemistry, a 3.....	Chemistry	6
General Physics, a 3, b 2.....	Physics	4
Advanced Physics, a 4, b 1.....	Physics	6
Light, a 3, b 1..	Physics	8
Entomology, a & b 4.....	Entomology	4
Economic Entomology, a 2.....	Entomology	6
Systematic Entomology, b 2.....	Entomology	8
Bird Life, a & b 2.....	Entomology	10
Materia Medica, a 5.....	Pharmacy	3
General Zoology, a 2, b 3.....	Zoology	3
Comparative Anatomy of Vertebrates, a & b 5.....	Zoology	8
Histology, a & b 5.....	Zoology	10
Embryology, a & b 5.....	Zoology	12
Genetics, a 3.....	Horticulture	7
Calculus, a 5.....	Mathematics	12
Analytic Mechanics, a 5.....	Mathematics	14
French, a 3.....	French	6
German, a 3.....	German	6
American History, (1829-1865), a 3.....	History	10
Nineteenth Century History, a 2.....	History	12
Political Parties in the United States, a 3.....	History	14
Principles of Education, a 3.....	Philosophy	6
Theory and Practice of Design, a & b 2.....	Art	5
Art History, a 2.....	Art	7
English Poetry from 1832, a 3.....	English	14
Shakespeare and the Drama, a 3.....	English	16
Biblical History and Literature, a 2.....	English	20
Argumentation, a 3.....	English	22
Theory of Interpretation and Musical Forms, a 2.....	Music	9
History of Music, a 3.....	Music	10
International Law, a 1.....	Military	3
Applied Tactics, a 1.....	Military	5

## PHARMACY

### FRESHMAN YEAR

#### First Semester—

Rhetoric, a 3.....	English	9
Elementary Logic, a 2.....	Philosophy	1
Elementary Chemistry, a & b 5.....	Chemistry	1
Solid Geometry, a 3.....	Mathematics	7
Plane Trigonometry, a 2.....	Mathematics	9
Military Tactics, 3.....		
Elective, a 4.....		
French, a 4.....	French	1
German, a 4.....	German	1

#### Second Semester—

Rhetoric, a 3.....	English	10
Elementary Logic, a 2.....	Philosophy	2
Elementary Chemistry, a & b 5.....	Chemistry	2
Advanced Algebra, a 3.....	Mathematics	8
Elementary Law, a 3.....	Commercial Science	8
Military Tactics, 3.....		
Elective, a 4.....		
French, a 4.....	French	2
German, a 4.....	German	2

### SOPHOMORE YEAR

#### First Semester—

General Botany, a 2, b 3.....	Botany	1
General Physics, a 3, b 2.....	Physics	3
Quantitative Chemistry, a & b 5.....	Chemistry	3
Military Tactics, 3.....		
Elective, a 4.....		
French, a 4.....	French	3
German, a 4.....	German	3

#### Second Semester—

General Botany, a 2, b 3.....	Botany	2
General Physics, a 3, b 2.....	Physics	4
Chemistry of Foods and Nutrition, a & b 5.....	Chemistry	4
Elements of Military Science, a 1.....	Military Science	1
Military Tactics, 3.....		
Elective, a 4.....		
French, a 4.....	French	4
German, a 4.....	German	4

---

**JUNIOR YEAR**
**First Semester—**

English Literature, from Milton to Goldsmith, a 3....	English	11
Anatomical Methods, a 3, b 2.....	Zoology	5
Pharmacy Latin, a 5.....	Pharmacy	1
Industrial Chemistry, a 3.....	Chemistry	7
Medieval History, a 3.....	History	7

**Second Semester—**

Anatomical Methods and Physiology, a 3, b 2.....	Zoology	6
Chemical Toxicology, b 5.....	Pharmacy	11
Pharmacognosy, a & b 5.....	Botany	10
Modern History, a 3.....	History	8

**SENIOR YEAR****First Semester—**

Materia Medica, a 5.....	Pharmacy	2
Pharmacy, a 5.....	Pharmacy	4
Pharmacy Laboratory, b 3.....	Pharmacy	5
Pharmaceutical Problems, a 2.....	Pharmacy	6
Bacteriology, a & b 5.....	Veterinary	8

**Second Semester—**

Materia Medica, a 5.....	Pharmacy	3
Pharmacy, a 5.....	Pharmacy	7
Pharmacy Laboratory, b 5.....	Pharmacy	8
Volumetric Analysis & Drug Assaying, a & b 5.....	Pharmacy	9

---



---

**TWO YEAR COURSE IN PHARMACY**


---

**FIRST YEAR****First Semester—**

Elementary Chemistry, a & b 5.....	Chemistry	1
General Botany, a 2, b 3.....	Botany	1
Anatomical Methods, a 3, b 2.....	Zoology	5
Pharmacy Latin, a 5.....	Pharmacy	1
Military Tactics, 3.....		

**Second Semester—**

Elementary Chemistry, a & b 5.....	Chemistry	2
General Botany, a 2, b 3.....	Botany	2
Anatomical Methods and Physiology, a 3, b 2.....	Zoology	6
Pharmacognosy, a & b 5.....	Botany	5
Military Tactics, 3.....		



---

**SECOND YEAR****First Semester—**

Materia Medica, a 5.....	Pharmacy	2
Pharmacy, a 5.....	Pharmacy	4
Quantitative Chemistry, a & b 5.....	Chemistry	3
Pharmacy Laboratory, b 3.....	Pharmacy	5
Pharmaceutical Arithmetic, a 2.....	Pharmacy	6
Military Tactics, 3.....		

**Second Semester—**

Materia Medica, a 5.....	Pharmacy	3
Pharmacy, a 5.....	Pharmacy	7
Volumetric Analysis and Drug Assaying, a & b 5....	Pharmacy	9
Pharmacy Laboratory, b 5.....	Pharmacy	8
Military Tactics, 3.....		

## DEPARTMENTS AND WORK

---

### The Agricultural Experiment Station

JAMES W. WILSON, DIRECTOR.

Under the provisions of the Hatch Act of March 2, 1887, and the Adams Act of March 20, 1906, the state received during the fiscal year of 1909-1910 \$28,000 from the treasury of the United States for the maintenance of an experiment station. By an act of the legislature this institution was made a part of the South Dakota Agricultural College. Its object is to investigate along agricultural lines, publish the results in bulletin form and distribute them to the residents of the state for their information and benefit. It consists of seven divisions, namely, agronomy, animal husbandry, dairy, horticulture, chemistry, botany and veterinary.

Each of these divisions is in charge of an expert who is also professor of the same subject in the college.

About sixty acres of the college farm are set aside for experiments in crop rotations and testing varieties of grains.

Another sixty acres are utilized for experiments along horticultural lines, where trees, shrubs and vines are grown in profusion. Adaptation of grains, grasses, forage plants, fruits, trees, shrubs and vegetables for the Northwest, is being carried on in co-operation with the United States Department of Agriculture and as a result many valuable varieties have been introduced which probably would not otherwise have reached us.

Each division is provided by the State with the proper facilities to conduct investigations, and at least four bulletins are published annually, which are free to the residents of the state. Queries pertaining to the various agricultural interests are answered promptly. The regular bulletin mailing list of the station numbers over 19,000 names.

All communications to this department should be addressed to the Director.

## Department of Animal Husbandry

---

PROFESSOR WILSON, MR. THOMPSON.

The instruction given in this department is made as practical as possible. The college herds and flocks include representatives of eighteen of the leading breeds of domestic animals. Practical work is given daily in score card practice to enable the student to distinguish between the poor and the good and between the good and the fancy kinds of animals. Many requests are made upon this department for judges of live stock at our district and county fairs.

The following work is offered:

1. Stock Judging. Four recitations a week, first semester; required in the freshman year of the Agriculture Course. Study and practice in judging market types of horses, cattle, sheep and swine. Text: Craig's Judging Live Stock.

2. Breeds of Live Stock. Four recitations a week, second semester; required in the sophomore year of the animal husbandry group, Agriculture Course. A study of the various breeds, their origin, development, characteristics and adaptability to different climates. Text: Plumb's Types and Breeds of Farm Animals.

3. Advanced Stock Judging. Two recitations a week first semester; required in the junior year of the animal husbandry and veterinary groups of the Agriculture Course; prerequisite, Animal Husbandry 1 and 2. Particular attention is given to show-yard work.

4. Principles of Animal Breeding. Three recitations a week, second semester; required in the freshman year of the Agriculture Course; prerequisite, Animal Husbandry 2.

5. Animal Nutrition. Three recitations a week, first semester; required in the junior year of the veterinary and animal husbandry groups, elective in the senior year of the dairy husbandry group, Agriculture Course; prerequisite, Chemistry 2. A study of the laws and principles of animal nutrition. The physical and chemical characteristics of the various feeding stuffs and their relation to practical feeding operations. Text: Jordan's Feeding of Animals.

6. Stock Feeding and Management. Two recitations a week, first semester; required in the senior year in the animal husbandry group of the Agriculture Course; prerequisite, Animal Husbandry 5. A study of the feeding and management of the various classes of live stock and station investigation and results. Text: Henry's Feeds and Feeding, with references.

7. Stock Feeding and Management. Three recitations a week, second semester; required in the senior year of the animal husbandry group of the Agriculture Course. Continuation of Animal Husbandry 6.

---

## Department of Dairy Husbandry

---

PROFESSOR LARSEN, MR. LUND, MR. WHITE.

This department offers two separate courses: (1) the Four Year Agriculture Course, the last one and a half years of which are devoted chiefly to special dairy studies; (2) the Three Months Dairy Course.

The first course has been outlined with a special view of fitting young men to become teachers and investigators of dairying, in public schools, agricultural colleges and experiment stations, inspectors of creameries and dairy products in municipal, state and government service and superintendents of large creameries and dairy farms.

The second course is given with a view of training men to become successful operators of creameries, cheese factories, central plants and dairy farms.

The demand for good men properly trained along dairy lines is great. Compensation for dairy and creamery work is good. Worthy students can depend upon the co-operation of this department in securing suitable work.

The Dairy Husbandry Department operates on a commercial basis a well equipped creamery and cheese factory all the year around. It is a two-story brick building. The first floor is occupied with the various creamery machinery and cheesemaking equipments. On the second floor, the research laboratory, milk inspection laboratory, class rooms and offices are located.

The dairy herd, consisting of representatives of the principal dairy breeds, which is kept in a separate dairy barn, affords excellent facilities for studying the various phases of milk production.

Experiments relating to feeding, breeding and care of dairy stock, and the manufacture of dairy products are in progress at all times. Students may have advantage of keeping in touch



with these experiments, note manners of outlining and executing investigational work, and profit from results. Advanced worthy dairy students may arrange to assist in some of this work.

The following work is offered:

1. Farm Dairying. Two lectures and one laboratory period a week, second semester; required in the sophomore year of the four year Agriculture Course, and with some modification during the first year of the School of Agriculture.

This subject comprises a study of the economic production, secretion and composition of milk; of the comparative economy in disposing of and utilizing milk for various purposes on the farm, of testing milk and its products for fat, acid and common adulterations; of the effects of germs and degree of purity on dairy products; of the separating and handling of milk and cream and the manufacture of butter and cheese on the farm.

2. Inspection and Testing of Dairy Products. Four lecture and laboratory periods a week, second semester; required in the sophomore year of the dairy group and in the junior year of the veterinary group, Agriculture Course.

Those taking this course should have had at least one terms' work in chemistry. It embodies a thorough study of the Babcock test for fat, of the lactometer and its application, of the tests for determining the acidity of dairy products, of the various tests for moisture in butter, of the influence and detection of different preservatives and adulterations, and a study of the various pure dairy food standards.

3. Dairy Bacteriology. One lecture and two laboratory periods a week, first semester; required in the senior year of the dairy group, Agriculture Course.

In this course are taught bacteriological principles as related to dairying, contamination of milk, fermentations of milk, and their control, relation of disease bacteria to milk, preservation of milk for commercial purposes, bacteria as related to the manufacture of butter, and bacteria as related to the manufacture of cheese. General bacteriology is recommended as a prerequisite study.

4. Factory Operation (Creamery). Three lectures and two laboratory periods a week, first semester; required in the junior year of the dairy group, Agriculture Course; prerequisite, Dairy 2.

A thorough study of the receiving, sampling and separation of milk and cream, the preparation and use of starters, pasteurization and ripening of cream, principles of churning, washing, salting, working, packing and marketing butter. Attention will also be given to the organization, location, construction, drainage, cooling

and ventilation of factories and creameries, the economic disposal of factory by-products and various methods of factory refrigeration.

5. **Factory Operation (Cheese).** Three lectures and two laboratory periods a week, second semester; required in the junior year of the dairy group, Agriculture Course.

This course comprises a study of milk as applied to cheese-making, the manufacture of hard and soft cheese, including the principles involved in the setting, cutting, cooking, dipping, milling, salting, pressing, curing and marketing of cheese.

6. **Dairy Management.** Two lectures and one laboratory period a week, first semester; required in the senior year of the dairy group, Agriculture Course.

The various methods of improving and upbuilding a dairy herd, and the advanced judging of dairy stock will be emphasized, methods of weighing, testing and recording feed consumed and milk produced by each cow will be outlined. The history and adaptability of various dairy breeds to different conditions and relation of dairy types to milk producing capacity will be studied. This course will also embody study of the extent to which dairy farming is practiced and under which conditions it is best applicable, of dairy farming as an adjunct to general farming and the arrangement and construction of dairy farm buildings, stalls, yards, etc.

7. **Dairy Technology.** Two lectures a week, second semester; required in the senior year of the dairy group of the Agriculture Course; prerequisite, Chemistry 2 and Dairy 3.

This course treats of the ways in which milk and its products are utilized outside of the scope ordinarily embraced under dairying. It comprises such subjects as value of milk as a food, the preparation of certified, modified, standardized, fermented and condensed milk, the manufacture of casein, milk ivory, milk sugar, renovated butter and oleomargarine.

8. **Dairy Research.** Second semester, senior year; elective. A study of various views held by different authorities on certain important dairy subjects, a digest of recent dairy work of the experiment stations, and of comparative dairying as practiced in leading countries. A reading knowledge of German is recommended.

9. **Dairy Practice.** Elective. The college has a commercial creamery and cheese factory in operation every day during the year except Sunday. Students who specialize in dairying and need practical experience should make it a point to take this course. Arrangements can be made to do this practical work at almost any time during the year. Vacation time is recommended.

10. **Domestic Dairying.** One lecture and one laboratory period a week; elective. This course includes lectures and laboratory work on such phases of dairying as will be of greatest interest and value to ladies and home life, such as properties of milk, the various uses of milk, and each of its component parts for the home as well

as for commercial purposes, and the relation of germs to quality of dairy products and to consumers of dairy products. The detection of adulteration of milk and dairy products, the use of the Babcock test for fat, effects of different ferments on milk and dairy products, and the making of cheese and butter on the farm will be demonstrated in the College Creamery laboratory.

---

## Department of Veterinary Medicine

---

DR. MOORE.

This department occupies a separate two-story building with a hospital in connection. The operating room is equipped with all necessary supplies and instruments for ordinary surgical operations. Free clinics are held each Saturday forenoon at which students assist and perform operations under the direction of the instructor. The instruction offered is aimed to meet the requirements of the agricultural student as well as the special student in veterinary medicine. Increased requirements being demanded of matriculants by the veterinary colleges, the increasing demand for veterinarians who have had a general education in addition to their professional training emphasizes the desirability, and in many cases the necessity, of obtaining a baccalaureate degree before entering a veterinary college. The student who therefore anticipates entering the veterinary profession is strongly urged to complete one of the four year courses before undertaking his professional training. For a suggested arrangement of studies see the veterinary group of the Agriculture Course.

The following work is offered :

1. Horseshoeing and Lameness. Two recitations a week, second semester; required in the sophomore year of the animal husbandry and veterinary groups, Agriculture Course. The anatomy of the foot, its care, preparation, and shoeing; diseases of the organs of locomotion.

2-3. Veterinary Anatomy. Five recitation and laboratory periods a weeks, first and second semesters; required in the junior year of the veterinary group, Agriculture Course. Conducted by the laboratory method with frequent quizzes. Osteology and arthrology.

4. Veterinary Medicine. Five recitation and laboratory periods



a week, first semester; required in the senior year of the animal husbandry and the veterinary groups, elective in the senior year of the dairy husbandry group, Agriculture Course. The work will consist of lectures and clinics.

5. Veterinary Medicine. Five recitation and laboratory periods a week, second semester; required and elective in the same courses as 4.

6. Bacteriology. Five recitation and laboratory periods a week, first semester; required in the junior year of the Home Economics Course and in the senior year of the Pharmacy Course and the veterinary, chemistry and animal husbandry groups, Agriculture Course; elective in the junior or senior year of the General Science Course and the senior year of the dairy husbandry group, Agriculture Course.

Veterinary Physiology. See Department of Zoology, courses 2, 3, a and c.

---

## Agronomy Department

---

PROFESSOR WILLIS, ASSOCIATE PROFESSOR BOPP, MR. POTTER,  
MR. BESLEY, MR. GRIGGS, MR. MOORE.

The aim of the Agronomy Department is to give the student some knowledge of the origin and formation of the soil, physical properties of the soil, supply of food to the growing plant, soil moisture, soil temperature, tillage, nutrition, capillary and water holding capacity of various soils, the effect of mulching and tillage upon the conservation of moisture. Also the classifications, improvements, culture, harvesting, uses, history and geographical distribution of crops. Class work and laboratory practice in setting up and testing farm machinery, noting construction and elements necessary for successful work. The arrangement, design, construction, and cost of farm buildings; especially barns, granaries and silos; in fact, to have the student see and feel that agriculture is a science and an art, involving in its scope a knowledge of the natural sciences to the upbuilding of the health, wealth and general good of all people, by the maintenance of the permanency of the fertility of the soil.



With this aim in view the department wishes to offer the following courses:

1. Farm Crops. Five lecture and laboratory periods a week first semester; required in the sophomore year of the Agriculture Course. Judging of wheat, barley, oats, emmer, potatoes, corn, etc., classification, improvement, culture, harvesting, uses, history, and geographical distribution of crops. Grain grading, cleaning, shrinkage, and care of stored crops to prevent injury and loss.

2. Farm Crops. Five recitation and laboratory periods a week, second semester, elective in the sophomore year of the agronomy group, Agriculture Course; prerequisite, Agronomy 1.

Vitality and germination of seeds, preservation of seeds, methods of seeding; conditions of plant growth; peculiarities of the different agricultural plants in respect to structure, habits, and requirements for successful growth,—weeds and weed seeds, their identification and methods of destruction, fungus diseases, such as smut, of oats and wheat, and blight, rust and scab of wheat, oats, barley, scab and rot of potatoes, methods of prevention; insects injurious to farm crops and how to combat them. Class room, laboratory and field work.

3. Farm Crops. Three recitation periods a week second semester; elective in the sophomore year of the agronomy group, Agriculture Course; prerequisite, Agronomy 1. A study of the various plants grown for forage in this state, adaptability of each for different sections of the state, comparison of native with the cultivated species. Methods of seeding, harvesting, and treatment of soil while in sod.

4. Soils. Five lecture and laboratory periods a week, first semester; required in the junior year of the Agriculture Course, except of students electing the veterinary group; prerequisite, Physics 1 and 2, Chemistry 1 and 2. The origin and formation of soil, physical properties of the soil, supply of food to the growing plant, soil moisture, soil temperature, tillage, nutrition, irrigation; physical analysis of soils; organic matter, real and apparent, specific gravity; capillary power of different soils; methods of conserving soil water; effect of spring or fall plowing upon soil water; physical effects of different crop rotations.

5. Soils. Five lecture and laboratory periods a week, second semester; required in the junior year of the Agriculture Course except of students electing the veterinary group; prerequisite, Agronomy 1 and 4, Chemistry 3. The influence of fertility, natural or supplied, upon the field or various crops; the effects of different crops upon the soil and upon succeeding crops; different rotations and the ultimate effect of different systems of farming upon the

fertility and productive capacity of soils. Devising rotations fitted for the soils of South Dakota. The above will be supplemented by a laboratory study of manures and fertilizers, their composition and their agricultural and commercial values; of soils cropped continuously with different crops and with a series of crops; of the fertility of the various types of soils from different sections of South Dakota.

6. Soils. Five recitation and laboratory periods a week, first semester; elective in the senior year of the agronomy group, Agriculture Course; prerequisite, Agronomy 4. For students wishing to make a further study of the physical properties of special soils, including a mechanical analysis of such soils by the means of the centrifugal method. A study in the field of the effects of disking, harrowing, and rolling, time and depth of cultivation with reference to soil moisture and temperature.

7. Soils. Five recitation and laboratory periods a week, second semester; elective in the senior year of the agronomy group, Agriculture Course; prerequisite, Agronomy 4 and 5. Continuation and advanced work in Soils 5. Primarily designed to enable students to study the fertility and productivity of those special soils in which they may be particularly interested. This work may include further laboratory work and supplementary literature bearing upon the subject. Pot cultures may be carried on in connection with the other investigations. The students will familiarize themselves with the correct principles and methods and conclusions to be deduced from such investigations and from the study of similar work of experiment stations and experimenters.

8. Farm Machinery. Three recitation and laboratory periods a week, second semester; elective in the junior year of the agronomy group, Agriculture Course. Principles of draft, roads, farm motors, horse power, engines, windmills, farm machinery, friction pumps. Laboratory work with models and apparatus for measuring draft, examination and test of farm machinery and implements.

9. Geology. Five recitation periods a week, first semester; required in the senior year of the General Science, Civil Engineering and Agriculture Courses. The object of the course in Geology is to give the student a review of the physical condition of the earth; the various dynamic agencies, and the results of their activities; the origin and structure of rocks; and finally the geological history of the globe and the appearance and development of the principal races of animals and plants. The geology of South Dakota is emphasized. The work is based on Scott's Geology. Collection of rocks and minerals, physiographic and geological models and also lantern slides afford ample means for illustration.

10. Dairy Lectures. Three recitation periods a week, second semester; elective. The students will be taught the chief principles involved in plant growth, such as the functions of the soil, air, water,

fertilizers and tilth. The importance and methods of seed selection, rotation of crops, methods of producing the chief crops to maturity as well as for forage, and a consideration of the principal farm machinery.

11. Farm Management. Five recitation periods a week, second semester; required in the senior year of the agronomy group, Agriculture Course. The selection, laying out and general management of farms, farm buildings, selection and rotation of crops, markets; general summing up and correlation of the work in agronomy.

12. Advanced Farm Crops. Five recitation and laboratory periods a week, first semester; elective in the senior year of the agronomy group, Agriculture Course; prerequisite, Agronomy 1 and 2. A study of succession of crops with special reference to systematic farming and economic distribution of labor, methods of culture, cost of production, consumption of products and by products.

13. Concrete Construction for Agricultural Purposes. Three recitation and laboratory periods a week, second semester; elective in the senior year of the agronomy group. Agriculture Course. Testing cements, sand, rock, and gravel. Mixing concrete and making sample walks, fence posts, etc.

14. Investigation and Thesis. Five to ten recitation periods a week throughout the year; elective in the senior year of the agronomy group, Agriculture Course. This course varies in the subject matter according to the topics on which theses are written.

### GRADUATE COURSES.

15. Thesis Work. Throughout the entire year.

16. Different systems of agriculture practices and the effect of these systems upon the soil.

17. A detailed study of investigations being carried on in South Dakota.

18. Mechanical Composition of Soils. Influence upon granulation and other factors of a physical nature which affect crop production.

19. Drainage water; surface and sub-drainage with special reference to soil fertility.

20. Adaptation of varieties to soil types.

21. Special work in the field, consisting of testing varieties of corn, oats, wheat, potatoes, and other farm crops; methods of planting corn, seeding grains, grasses, and other forage crops; culture of corn, potatoes, etc.; practice in treating small grain for smut, potatoes for scab, and studying the effect upon the crops; combating injurious insects. Other practical experiments may be arranged with the instructor.



## Department of Horticulture and Forestry

PROFESSOR HANSEN, MR. STOLTENBERG.

In this department the work is given from two standpoints. In one, especially in the study of genetics, emphasis is placed upon the general philosophy of the subject as being essential to a general education. The claim is made that some of the principles of horticulture and forestry are essential to any well rounded education and to the best preparation for citizenship. The second standpoint is that of students intending to make a life work of horticulture or forestry, either as a business or a profession. Throughout the course full use is made of the student's attainments in the various sciences underlying these subjects. The variation of plants and the principles and methods of their development under the hand of man are considered, as well as their propagation and cultivation.

Field and laboratory exercises emphasize the lectures and recitations of the class room. The habit of independent investigation and close observance is encouraged by requiring written reports of outdoor excursions or demonstrations. Excellent facilities for practical illustration are afforded by the ninety acres of experiment station horticulture grounds and college campus. In this domain are included orchards, forestry plantations, nurseries, vegetable gardens, small fruit plantations, flower borders and a collection of ornamental plants. Special attention is paid to the breeding of hardy fruits adapted to prairie conditions and the work in this line is now second to none in extent. The department greenhouses consist of two sections, one for general floriculture work and the other for fruit-breeding experiments. In addition, the horticultural buildings contain class rooms, laboratory, grafting and potting rooms and storage cellars.

The commercial nursery course is intended as a short winter course for those who desire to engage in the business of growing plants and trees for sale, especially those adapted to prairie conditions.

Special stress is laid upon practical work in the grafting room. No examination is required for entrance to this short course.



**The following work is offered:**

1. General Horticulture. One laboratory period a week throughout the year; required in the sophomore year of the Agriculture Course. An introduction to the various divisions of horticultural work, especially the propagation of plants and the best western nursery methods of planting, pruning and cultivation. Special attention is given to the grafting and budding of fruit trees. Elementary exercises in the identification and description of fruits and the origination of new varieties. Students are required in their laboratory notes to give the reasons why as well as the methods.

2. Floriculture and Market Gardening. One recitation and laboratory period a week, second semester; required in the sophomore year of the horticulture group, Agriculture Course.

The commercial and amateur cultivation of flowers and vegetables under glass and in the open air; lectures, demonstrations, and text book work.

3. Forestry. Two lectures or recitations a week, second semester; required in the sophomore year of the horticulture group, Agriculture Course.

Principles of forestry; the influence of forests on climate; timber planting on the prairies; European forestry methods as modified by prairie conditions; shelter belts; the propagation, cultivation, characteristics and uses of forest trees; lectures and demonstrations.

Texts: Pinchot's Primer of Forestry; Green's Forestry in Minnesota; Proceedings of the American Forest Congress.

4. Systematic Pomology. Two laboratory exercises a week, first semester; required in the senior year of the horticulture group, Agriculture Course.

Principles of fruit culture with special reference to prairie conditions; exercises in the identification and description of fruits. Texts: American Horticultural Manual, Bailey's Principles of Fruit Culture.

5. Landscape Gardening. One recitation and one laboratory period a week, second semester; required in the senior year of the horticulture group, Agriculture Course.

The philosophy of the Beautiful in its various modes of expression; gardening as one of the fine arts; historic development of the ancient or geometric and the modern or natural styles; the best ornamental trees, shrubs, plants and hedges. Special attention is paid to the development of originality in the planning and laying out of country and city home grounds, parks and school grounds; lectures; text-book, and references.

6. Genetics. Three recitations a week, second semester; required in the senior year, Agriculture Course.

This subject is especially recommended to students of the sciences relating to plants and animals, and also to students of general

history and sociology. The evolution of plants and animals under the hand of man and in the state of nature; the philosophy of artificial evolution or the modification and amelioration of plants and animals by environment, selection and hybridization; the relation of genetics to sociology; recent theories and work in plant-breeding.

Texts: Darwin's *Animals and Plants under Domestication*; De Vries' *Species and Varieties, their Origin by Mutation*; Bailey's *Plant-Breeding and Survival of the Unlike*; Reports of International Conferences on Genetics; Reports of the U. S. Department of Agriculture.

7. Plant Propagation. Practical exercises in tree, shrub and plant propagation for students in the short agricultural and nursery courses.

8. Floriculture and Home Gardening. Instruction in home gardening for the students in the short winter course in domestic economy and agriculture; text-books; practical demonstrations and exercises.

9. Forestry and Landscape Gardening. Lectures and exercises in the leading essentials of tree culture and the planting of home grounds for students in the short winter courses in agriculture.

---

## Department of Home Economics and Domestic Art

---

MISS WILCOX, MISS SMILEY.

The work of this department is developed along two lines, home economics and domestic art.

Home economics includes the courses which have to do especially with scientific study of the activities of the home.

Domestic art includes the practical courses in cooking and serving.

This department stands for a better appreciation and a wider knowledge of the things that make for better homes. While the work is essentially scientific in character, the courses have been planned with due regard to cultural needs. The department is very favorably located, occupying the entire floor, and is well equipped for the various lines of work. Charts and exhibits illustrating the chemical composition of food are found in the class room; general reference books and magazines are found in the general library.

1. Food and Dietetics. Four recitations and one laboratory period a week, first semester; required in the Home Economics Course, elective in the General Science Course, freshman year; prerequisite, a freshman, or higher, classification. The nature, nutritive constituents and relative value of foods. Typical processes of food production. Cost of food. Diaries.

2. Textiles. Two recitations a week, second semester; required in the sophomore year of the Home Economics Course; elective in the freshman year of the General Science Course; prerequisite, a freshman, or higher, classification. Study of fabrics; fibres used in making fabrics, their preparation and manufacture; primitive industries, spinning and weaving; use of fabrics in clothing and in the house.

3. Application of heat to food. Three recitations and two laboratory periods a week, second semester; required in the junior year of the Home Economics Course, elective to young ladies in the junior year of the General Science Course in place of Physics 4; prerequisite, Botany 2, Chemistry 3, Zoology 3, and Home Economics 1. Food principles; effect of heat; household fuels and their uses; cooking apparatus and the principles of construction; cooking and serving of typical foods.

4. Household Sanitation and General Hygiene. Three recitations a week, first semester; required in the senior year of the Home Economics Course; elective, together with Home Economics 7 to young ladies in the junior year of the General Science Course in place of Physics 3; prerequisite, Chemistry 2, Botany 2 and Zoology 2. By reference and lectures the following subjects are considered: Situation of a house with regard to soil drainage and general surroundings, plumbing and heating arrangements, water supply, sanitary and unsanitary conditions in house, problems of personal and public hygiene, necessary precautions against spread of disease.

5. Home Nursing and Invalid Cookery. Three recitations a week first semester; required in the senior year of the Home Economics Course; prerequisite, Home Economics 1 and Bacteriology. This course includes a study of diet for the sick, care of the sick in the home and the preparation of food for them. A few lectures are usually given by a physician.

6. Household Economy. Three recitations a week, second semester; elective in the freshman year of the General Science Course. The aim of this course is to set forth some of the principles underlying housekeeping, including the organization and management of the household.

7. The House. Two recitations a week, first semester; required in the senior year of the Home Economics Course, elective together with Home Economics 4, in place of Physics 3 to young ladies in the junior year of the General Science Course; prerequisite, the work below the junior year. Study of the development of the modern



house from primitive conditions; modern household problems of furnishing and equipment.

8. Teaching of Home Economics. Two recitations a week, second semester; elective in the senior year of the Home Economics Course; prerequisite, Philosophy 1 and 3. Purpose and methods of work; a consideration of courses of study, school equipment; the relation of the subject to other studies and the school as a whole.

9. Advanced Work in Experimental Cookery. Two laboratory periods a week, second semester; required in the senior year of the Home Economics Course.

10. Organization of the Retail Market. Two lecture periods a week, first semester; required in the senior year of the Home Economics Course.

An elementary course intended to familiarize the student with the machinery of trade with which the house proper comes in contact. The evolution of present methods from mediaeval forms, the modern stores, as department and catalogue stores, will be considered.

#### DOMESTIC ART.

For description of Domestic Art 1 and 2, see the preparatory department.

3. Sewing. Three laboratory periods a week, second semester; required in the freshman year of the Home Economics Course. Plain dressmaking, drafting, cutting, fitting and general dressmaking. Each student is required to make a shirt-waist suit. Students who have had this work or its equivalent may take a course in art needlework instead. The course will be fitted, as much as possible, to the needs of the individual student.

4. Millinery and Tailoring of Garments. Two laboratory periods a week, second semester; required in the sophomore year of the Home Economics Course.

---

### Department of Mechanical Engineering

---

PROFESSOR SOLBERG, MR. COOK.

The object of the work offered is to give the student a thorough training in the theoretical principles underlying the science of mechanics and machines and at the same time to enable them to become particularly familiar with some of the numerous applications of these principles which are of such inestimable value to the human race.



The instruction is both theoretical and practical. The usual methods of text-book study and lectures are employed, but the student is required to put into practice, as far as possible, the instruction he receives. Hence the work of the class-room is supplemented and practically exemplified by practice in shops. The student not only studies the theories of constructing and operating machinery, but in the drawing room he designs, and in the shop he constructs and operates such machines. It is believed that those who complete this course will be able to fill responsible positions in manufacturing establishments. It is important that French be elected as the language that is required in addition to English.

The department is located in the Engineering Building. The workshops are supplied with a large variety and quantity of tools. The woodshop is furnished with twenty-five sets of carpenter tools and with eight wood turning and one pattern maker's lathe, a scroll saw, a combination circular saw and a twenty-inch planer. There is also a variety of special tools for wood working.

The machine shop is furnished with a large number of engine lathes of different sizes, a universal milling machine, shaper, planer, tool grinder, drill press, emery wheels and a great variety of hand tools. The machinery is driven by a 50 H. P. Atlas Engine.

The Experimental laboratory is equipped with a 100,000-pound Riehle vertical screw testing machine, a 2,000-pound cement testing machine, together with steam, gas and hot-air engines. The machines are furnished with a large variety of smaller instruments for making complete tests, such as indicators, planimeters, tachometers, extensometers, compressometers, deflectometers, etc., also all the necessary equipment for testing cements and concretes.

Work in architectural drawing and designing is offered. Additional work along this line will be given to students who desire it.

A large number of pictures, drawings, and illustrative material has been recently added to the equipment through the liberality of manufacturers and friends of the college.

The following work is offered:

For description of Mechanical Engineering 1 and 2, see the preparatory department.

3. Machine Shop. Three laboratory periods a week, second semester; required in the freshman year of the Mechanical and the Electrical Engineering Courses. Manipulation of the various machines in turning, planing, shaping, milling, gear cutting and tool making.

4. Machine Shop. Five laboratory periods a week, first semester; required in the sophomore year of the Mechanical and the Electrical Engineering Courses. Construction of some machine or appliance from designs made in drawing room.

5. Mechanical Drawing. Five laboratory periods a week, first semester; required in the freshman year of the three Engineering Courses. Instrumental drawing, geometrical problems and parts of machines. This work is offered during the entire year, and at hours convenient to teachers and students.

6. Architectural Drawing. Three times a week, first or second semester; required in senior year of the horticultural group, Agriculture Course. Rendered drawings of simple buildings, examples of various orders, giving facility in draughtsmanship, familiarizing students with principles.

6a. Architectural Design. Three times a week, first semester; elective. Principles of planning introduced in practical problems, exercises in composition and details.

6b. Perspective. Five times a week, first or second semester; elective.

7. Descriptive Geometry. One recitation and two laboratory periods a week, second semester; required in the sophomore year of the three Engineering Courses; prerequisite, plane geometry. Instruction in methods of representing by drawing all geometrical magnitudes and solution of problems relating to these magnitudes in space.

8. Machine Design. Two laboratory periods a week, second semester; required in the sophomore year of the Mechanical and the Electrical Engineering Courses. Solution of various problems involving the design of simple parts of the machine.

9. Machine design. Four laboratory periods a week, first semester; required in the junior year of the three Engineering Courses. Continuation of Mechanical Engineering 8.

10. Elements of Mechanism. Three recitations a week, first semester; required in the junior year of the three Engineering Courses. Elements of machinery, velocity ratios, graphic representation of speed and acceleration; motion transmitting parts, such as gears, belts, cams, screws, link work; automatic feeds, parallel and quick return motions; designing. Text: Wood and Stahl.

11. Gas Engines and Gas Producers. Two recitations a week, first semester; required in the senior year of the Mechanical and

Electrical Engineering Courses and in the fifth year of the Civil Engineering Course; prerequisite, Thermodynamics. Study of the theory, design and operation of gas, gasoline and oil engines and of the various types of gas producers.

12. Steam Engines and Thermodynamics. Five recitations a week, second semester; required in the junior year of the three Engineering Courses; prerequisite, Calculus. Study of the modern steam engine, slide valve, and when in combination with independent cut-off valves, link motion and Zeuner diagrams, reciprocating parts and indicator practice; the principles of the theory of heat which are necessary to a study of the various kinds of heat engines; the application of laws of thermodynamics to the steam engine and a study of steam engine economy by entropy temperature analysis and by other graphical methods. Text: Ripper's Steam Engine.

13. Steam Boilers. Two recitations a week, first semester; required in the senior year of the three Engineering Courses; prerequisite, Mechanical Engineering 16. Advantages and disadvantages of using the various forms of boilers, methods of construction, tubes and flues, plates, riveting, bracing, grate and heating surface, guages and feed appliances, setting, care and operation. Text: Feabody's Steam Boilers.

14. Kinematics. Two laboratory periods a week, second semester; required for the fifth year degree in the Mechanical and the Civil Engineering Courses. Geometry of machinery, problems in the design of motion transmitting appliances.

15. Stresses in Framed Structures. Three recitations a week, first semester; required in the senior year of the Mechanical and the Civil Engineering Courses. Graphical determination of stresses under action of static, moving and wind forces. Text: Green, Vol. 1.

16. Mechanics of Materials. Five recitations a week, second semester; required in the junior year of the three Engineering Courses; prerequisite, Analytic Mechanics. Study of the strength and elastic properties of materials of construction, and the stresses in tension, compression, shearing, torsion and flexure; and mechanics of beams, columns and shafts. Text: Merriman's Mechanics of Materials.

17. Experimental Engineering. Three laboratory periods a week, first semester; required in the senior year of the three Engineering Courses; prerequisite, Mechanics of Materials. Here each student is required to carry out a definite series of tests of the various materials of construction, such as timber, cast iron, wrought iron, steel, cements and concretes.

18. Experimental Engineering. Two laboratory periods a week, second semester; required in the senior year of the three Engineering Courses. A complete series of tests of heating values of various coals; properties of different oils; calibration of gages, thermometers and planimeters; use of the steam engine indicator; throttling and



separating calorimeters; dynamometers and Prony brakes in the testing of steam and gasoline engines. Also includes complete efficiency tests of engines and boilers in actual service. Prerequisite, Steam Engines and Thermodynamics.

19. Engineering Design. Five laboratory periods a week, first semester; required for the fifth year degree in Mechanical Engineering. Solution in the drawing room of some practical problems in design and making working drawings of same.

20. Engineering Design. Five laboratory periods a week, second semester; required in the senior year of the Mechanical Engineering Course. Continuation of Mechanical Engineering 19.

21. Structural Design. Three laboratory periods a week, first semester; required for the fifth year degree in Mechanical Engineering. Designing of roofs and buildings for power stations. For students in mechanical and electrical engineering.

22. Structural Engineering. Two laboratory periods a week, second semester; required for the fifth year degree in Mechanical Engineering. Continuation of Mechanical Engineering 21, with special reference to results obtained from Mechanical Engineering 18.

23. Statics. Two recitations a week, first semester; required for the fifth year degree in Mechanical Engineering. Treated with special reference to the requirements of engineers. Resolution and composition of forces; center of gravity; principles of equilibrium with numerous applications. Graphic as well as algebraic methods are used. The various hurtful resistances to friction are considered, and numerous problems worked out in the drawing room.

24. Heating and Ventilation. Two recitations a week, second semester; required for the fifth year degree in Mechanical Engineering. A study of the principles underlying the design of the various systems of heating and ventilation in common use, including such details as loss of heat from buildings, problems in proportioning ventilating ducts; and the arrangement of systems of piping for steam and hot water. A study is also made of the various mechanical details entering into the installation of private plants and also plants operated from central stations.

25-26. Thesis Work. Two and three hours a week, first and second semesters; required for the fifth year degree in Mechanical Engineering. At the beginning of the fifth year's work a subject is assigned to each student, which he is to investigate, and on which he is required to prepare a thesis. This work may involve original design, or it may involve an experimental investigation of the action of certain machines or appliances or of the phenomena developed by the action of certain mechanical forces. In the pursuit of this work the student is thrown largely on his own responsibility. He is expected to familiarize himself with the literature on the subject and to study thoroughly the methods involved in the subject selected.



The subject chosen should be submitted to the professor in charge not later than November first of the current year.

---

## Department of Electrical Engineering

---

PROFESSOR BRACKETT, MR. HOY.

The purpose of the work offered in electrical engineering is to impart to the student a practical knowledge of the principles of applied electricity. A well equipped laboratory is provided for the use of the student to supplement the lecture and recitation work of the class room. The laboratory equipment consists of generators and motors of both the direct and alternating types, transformers and measuring instruments of different types and classes for the recording and measuring of current, pressure and speed. A six-cell storage battery is used in connection with the work in photometry. Various types of lamps, arc and incandescent, lamp banks, rheostats, and other apparatus are also available.

The student will be taught how to set up and adjust for the best conditions of operation all the usual types of dynamos, motors, transformers and standard auxiliary apparatus. Much additional laboratory work will be given to develop a clear understanding of the fundamental principles involved in the design of modern electrical machinery and in the most advanced engineering practice. The knowledge to be derived from much of this work is very important in the practical operation of electrical machinery and systems, but it cannot be obtained directly under the conditions of commercial service, where most of the apparatus must be used in one way only at all times.

The following courses are offered:

1. Electricity and Magnetism. Three recitations and one laboratory period a week, first semester; required in the junior year of the Electrical and Mechanical Engineering Courses, and in the senior year of the Civil Engineering Course; prerequisite. Mathematics 7, 8 and 9, Physics 4. This subject embraces a study of the theory and principles of static and current electricity, magnetism and the magnetic circuit, electro-magnetic induction and laws of the electric circuit, primary batteries, principles of telegraphy and the telephone.

2. **Electrical Measurements.** Two laboratory periods per week, second semester; required in the junior year of the Electrical Engineering Course; prerequisite, Electrical Engineering 1. Instruction and practice in the use, care and standardization of ammeters, voltmeters, wattmeters, resistance standards, Wheatstone bridges, potentiometers, sensitive galvanometers and standard cells. Estimation of the accuracy and reliability of different methods of testing, the correction and elimination of errors.

3. **Dynamo Electric Machinery.** Three recitations and two laboratory periods a week, second semester; required in the junior year of the Mechanical and Electrical Engineering Courses, and for the fifth year degree in Civil Engineering; prerequisite, Mathematics 11, Physics 4, and Electrical Engineering 1. Theory of the magnetic circuit, magnetic induction in iron, principles underlying the design, construction and operation of generators and motors. Resistance and insulation tests, experimental study of the operation and behavior of different types of motors and generators, efficiency tests.

4. **Alternating Currents.** Three recitations and two laboratory periods a week, first semester; required in the senior year of the Electrical Engineering Course, also for the fifth year degree in Mechanical Engineering; prerequisite, Mathematics, 11, Physics 4, and Electrical Engineering 1 and 3. Study of the flow of alternating currents, inductance, capacity, principles of construction of alternating current generators and motors, transformers; measurement of inductance and capacity, wave form of pressure and current, efficiency tests of machines and transformers.

5. **Dynamo Design.** Three laboratory periods a week, first semester; required in the senior year of the Electrical Engineering Course; prerequisite, Mathematics 11, Physics 4 and Electrical Engineering 1 and 3. In this the student works out the design and makes drawings for a shunt or compound wound direct current generator or motor. The object of this course is to teach the theory of design of machines and to familiarize the student with the details and parts of the machine in relation to each other and to the machine as a whole.

6. **Electric Light and Power Distribution.** Three recitations and two laboratory periods a week, second semester; required in the senior year of the Electrical Engineering Course; prerequisite, Mathematics 11, Physics 4 and Electrical Engineering 4. A study of transmission lines, resistance and inductance effects in line circuits, kinds of apparatus used in the generating station and in the receiving station, arc and incandescent lamps, special forms of lamps, indicating and recording instruments, laboratory work along the lines of lamp testing and the calibration of instruments.

7. **Polyphase Currents.** Three recitations and two laboratory periods a week, first semester; required for the fifth year degree in Electrical Engineering; prerequisite, all the work required for the

Bachelor's degree in this department. A study of polyphase currents, machines, transmission systems and measuring apparatus; experimental work in connection with polyphase currents.

8. Electrical Design. Three laboratory periods a week, first semester; required for the fifth year degree in Electrical Engineering; prerequisite, all the work required for the Bachelor's degree in this department. A study of the design of transformers, alternating current generators, induction motors, or some special kinds of apparatus, and the principles involved in the construction of the above.

9. Power Stations. Two recitations and three laboratory periods a week, second semester; required for the fifth year degree in Electrical Engineering; prerequisite, Electrical Engineering 7 and 8. A study of the different types of stations, arrangement of boilers, engines, machines, switchboards and electrical apparatus, location of station with respect to distributing system; station operation and maintenance. A station design is worked out by the student and drawings of plans made, while according to circumstances, more or less of the laboratory time will be spent on experiments and tests relating to plant operation and control.

10. Long Distance Transmission. Two recitations or lecture periods per week, second semester; required for the fifth year degree in Electrical Engineering; prerequisite, Electrical Engineering 1 to 7 inclusive. Study of long distance line construction, protective apparatus, switchboards, cutouts, regulating devices, etc., as exemplified in the latest practice; study of recent construction and installations, and application of theory. Present theoretical and practical limitations to efficient and profitable distribution over large areas, and the possibilities of future development.

11-12. Thesis. Two or three hours a week, first and second semesters. A complete investigation of some electrical subject or apparatus or the design of a machine or other electrical appliance, containing when possible the results of personal and independent observation. The subject must be selected early in the year (not later than November first,) and reports submitted from time to time concerning the progress of the work to the professor in charge.

---

## Department of Civil Engineering

---

PROFESSOR DERR.

The course in civil engineering is designed to impart to students general and technical knowledge, so that, equipped with their theoretical education and as much of engineering practice as can well be acquired in college, they may develop into successful practitioners.



It is aimed to give as thorough a preparation as time will permit in the following subjects: the surveying of land, location and construction of roads, railroads, canals and water works; the construction of foundations in water and on land, and of superstructures and tunnels; the application of mechanics, graphical statics, and descriptive geometry to the construction of various kinds of arches, trusses, roofs, and bridges; the sewerage of towns, and the irrigation and reclaiming of land; the preparation of detail drawings, and plans and specifications; the laws of construction as related to contracts, bids and bidders; political economy for the purpose of making clear the economic value of the civil engineer as a director of industrial enterprises.

1. Surveying. Five periods of recitation and field work a week, second semester; required in the freshman year of the Civil Engineering Course; prerequisite, Mathematics 9. General principles and fundamental operations; instruments; the declination of the magnetic needle; laying out, parting off and dividing up land; United States land surveys. Text: Tracy's Plane Surveying.

2. Surveying. Two periods of recitation and field work a week, second semester; required in the Agricultural, Mechanical Engineering and Electrical Engineering Courses; elective in the General Science Course, freshman year. An abridged course for other students in engineering and agriculture, along the lines of Civil Engineering 1.

3. Surveying. Five periods of recitation and field work a week, first semester; required in the sophomore year of the Civil Engineering Course. A continuation of Civil Engineering 1. Leveling, higher surveying; adjustment of instruments; topographic and exploratory surveying; plane and tachymetric surveying.

4. Topographical Surveying. Two periods of recitation and field work a week, second semester; required in the sophomore year of the Civil Engineering Course; prerequisite, Civil Engineering 1. Triangulation, precise leveling. Transit stadia lines, connecting with triangulation stations, form the basis for the topography, and plane-table practice is given in filling in the details. Maps are plotted to scale from the co-ordinates of the stadia lines, adjusted to the triangulation, and contours are drawn. Recitations, field work, computations and drawings. Text: Wilson's Topographical Surveying.

5. Hydraulics. Three recitations a week, first semester; required in the junior year of the Civil Engineering Course, in the senior year of the Mechanical and Electrical Engineering Courses; prerequisite, Mathematics 11. Hydrostatics and theoretical hydraulics; study of flow through orifices, tubes, pipes, over weirs, in conduits, canals



and rivers; application in engineering, water-power plants and developments. Text: Merriman's Hydraulics.

6. Geodesy. Three periods of recitation and field work a week, second semester; required in the junior year of the Civil Engineering Course; prerequisite, Mathematics 11 and Civil Engineering 1. Construction and use of instruments with reference to the elimination of instrumental errors; precise leveling; methods of sounding; development of the method of least squares, with application to survey problems and to the adjustment of a triangulation. Text: Crandall's Geodesy and Least Squares.

7. Water Supply. Two recitations a week, second semester; required in the junior year of the Civil Engineering Course; prerequisite, Civil Engineering 5. The design, construction, operation and management of municipal water supply systems. Text: Turneaure and Russell's Public Water Supplies.

8. Irrigation. Two recitations a week, second semester; required in the junior year of the Civil Engineering Course; prerequisite, Civil Engineering 5. The principles underlying the design and construction of irrigation works; hydrography, canals, storage reservoirs. Text: Wilson's Irrigation Engineering.

9. Masonry and Foundations. Two recitations a week, second semester; required in the junior year of the Civil Engineering Course in the senior year of the Mechanical and Electrical Engineering Courses; prerequisite, Mathematics 11 and 13. Building stone, retaining and reservoir walls and dams, arches; mechanics of masonry construction; foundations on land and water; coffer dams, caisson and crib dams; pneumatic caissons. Text: Baker's Masonry and Foundations.

10. Sewerage. Two recitations a week first semester; required in the senior year of the Civil Engineering Course. A study of the design, construction and operation of sewer systems, and of the various methods of sewage disposal; water purification. Text: Folwell's Sewerage.

11. Roads and Pavements. Two recitations a week, first semester; required in the senior year of the Civil Engineering Course. Construction and maintenance of city streets and country roads; study of pavements and paving materials. Text: Baker's Roads and Pavements.

12. Contracts and Specifications. Two recitations a week, first semester; required in the senior year of the Three Engineering Courses. Synopsis of the law of contracts as applied to engineering construction; study of typical contracts and specifications; riparian rights, boundary lines, survey descriptions, etc. Text: Johnson's Engineering Contracts and Specifications.

13. Railroad Engineering. One recitation and two periods of field work a week, second semester; required in the senior year of the Civil Engineering Course, and for the fifth year degree in

**Mechanical and Electrical Engineering;** prerequisite, Civil Engineering 1. The field work includes the laying out of curves and the staking out of structures, in addition to making the reconnaissance, preliminary and location surveys for a short line of railway; recitations, lectures, field work and drawing. Text: Raymond's Elements of Railroad Engineering.

14. **Dam and Reservoir Design.** Two laboratory periods a week, second semester; required in the senior year of the Civil Engineering Course; prerequisite, Civil Engineering 5, and Mathematics 11 and 13. The study of modern hydraulic construction; dams, reservoirs, conduits, levees, etc. Structures relating to water power, canals and irrigation.

15. **Structural Design.** Five periods of recitation and laboratory work a week first semester; required for the fifth year degree in Civil Engineering; prerequisite, Mathematics 11, Mechanical Engineering 6. Computation of stresses in roof and bridge trusses; highway and railway bridge trusses; graphic analysis of simple beams and roof and bridge trusses; center of gravity and moment of inertia. Text: Merriman and Jacoby's Roofs and Bridges, Parts I and II.

16. **Structural Design.** Three laboratory periods a week, second semester; required for the fifth year degree in Civil Engineering; prerequisite, Civil Engineering 15. Principles of economic design; design of plate girder bridge, pin bridge, riveted bridge; continuous bridges, draw bridges, cantilever bridges, suspension bridges, arches; building construction. Text: Merriman and Jacoby's Roofs and Bridges, Part III.

17. **Hydraulic Motors.** Three recitations a week, first semester; required for the fifth year degree in Civil Engineering; prerequisite, Civil Engineering 5. A study of reaction turbines and impulse wheels; construction, regulation, testing sources of loss of energy. Text: Church's Hydraulic Motors.

18. **Reinforced Concrete.** Three recitations a week, first semester; required for the fifth year degree in Civil Engineering; prerequisite, Mathematics 13, Mechanical Engineering 16. A study of reinforced concrete construction, including investigation of stresses and the determination of form and proportions; recitations, computations, and drawing.

19-20. **Thesis.** Two and three hours a week, first and second semester; required for the fifth year degree in Civil Engineering. The thesis is intended to show the student's ability to apply the fundamental principles acquired in this course, in original investigation or design of some engineering structure, the student working independently and making regular reports showing the progress of the investigation or design to the professor having charge of the sub-

ject. The subject and the plan of the work should be submitted to the professor in charge not later than November first of the current year.

---

## Department of English

---

\*PROFESSOR BATES, ASSOCIATE-PROFESSOR POWERS, MISS ANDREWS.

The aim of the department is two-fold: to train the student in the effective use of the English language in original composition, and give him an intelligent appreciation of English literature.

The following courses are offered:

For a description of English 1 to 8, see the preparatory department.

9. Rhetoric. Three recitation periods a week, first semester; required of all freshmen; prerequisite, the English of the preparatory department. Much practice in composition. The work is supplemented with reading.

10. Rhetoric. Three recitation periods a week, second semester; required of all freshmen; prerequisite, English 9. A continuation of English 9.

11. English Literature from Milton to Goldsmith. Three recitation periods a week, first semester; required in the sophomore year of the General Science and Home Economics Courses and in the junior year of the Pharmacy Course; prerequisite, English 10. A study in literature with much supplementary work in composition.

12. English Prose from Johnson to Morley. Three recitation periods a week, second semester; required in the sophomore year of the General Science and the Home Economics Courses. A study in literature with especial emphasis upon the forms of prose, and much practice in composition.

**Note**—The remaining subjects in English are elective, except that juniors in the General Science and Home Economics Courses are required to take 13 and 14, or 15 and 16, or 19 and 20. Subjects 13 and 14 are given in alternate years with 15 and 16, 13 and 14 being given in 1910-11. English 9 and 10 form the prerequisites to all the elective courses which are open in general to either juniors or seniors.

13. English Poetry from 1798 to 1832. Three recitation periods a week, first semester. See note above. A study of Wordsworth and his contemporaries.

---

\*On leave of absence, 1909-1910.



14. English Poetry from 1832. Three recitation periods a week, second semester. See note above. A study of Tennyson, Browning and their contemporaries.

15. English Literature from Beowulf to Milton. Three recitation periods a week, first semester. See note above. A special study is made of Chaucer; attention is also given to the development of the language.

16. Shakespeare and the Drama. Three recitation periods a week; second semester. See note above.

17. The English Novel. Three recitation periods a week, first semester. See note above.

19 and 20. Biblical Literature and History. Two recitation periods a week throughout the year; elective in the junior or senior year of the General Science Course.

21. Argumentation and Debating. Three recitation periods a week, first semester; elective in the junior or senior year of the General Science Course. A study of the principles of argumentation, with practice in brief writing and debating.

22. Argumentation and Debating. Three recitation periods a week, second semester; elective to the same class as English 21. A continuation of English 21. Special attention is given to team debating and the building of complete arguments.

---

## Department of Modern Languages

---

PROFESSOR HAYES.

Students who pursue work along scientific, technical or historical lines are virtually compelled to have at least a good reading knowledge of either French or German, while it is becoming generally recognized that they should have both.

In the General Science, the Home Economics and the Pharmacy Courses either French, German or Latin, and in the Agriculture Course, either French or German is required during the freshman and the sophomore years. In the Engineering Courses French is required during the sophomore year. Higher work is elective and the student is strongly advised to take a third year, if possible, of the language chosen.

### GERMAN.

1. German. Four recitations a week, first semester; elective in the freshman year according to the above requirements. German grammar, prose and composition; constant drill in pronunciation,



occasional memorizing of selected passages, and practice in speaking German. Reading is begun early. Text: Bacon's Grammar.

2. German. Four recitations a week, second semester. Continuation of German 1.

3. German. Four recitations a week, first semester; elective in the sophomore year according to the above requirements. Historical and other prose and poetry of the last century; composition and conversation. Text: Joynes-Meissner's Grammar.

4. German. Four recitations a week, second semester. Continuation of German 3. In addition there will be extensive reading of scientific German. Text: Wait's German Science Reader.

5. German. Three recitations a week, first semester; elective in the junior or senior year of the General Science Course, and in the senior year of the Home Economics Course. Lessing and Schiller, with a review of German literature up to their time. Nathan der Weise and Emilia Galotti, Die Jungfrau von Orleans and Wilhelm Tell. Themes and collateral reading.

6. German. Three recitations a week, second semester; elective in the same classes as German 5, of which it is a continuation. Goethe's life and works; Goethe and Schiller; Goethe and Carlyle; influence upon German and English literature. Faust, selected portions from both parts; Dichtung und Wahrheit or Goetz von Berlichingen. Themes and collateral reading.

#### FRENCH.

1. French. Four recitations a week, first semester; elective in the freshman year according to the above requirements. French grammar, prose, and composition. Thorough drill in pronunciation; reading and practice in speaking begun very early. Texts: Fraser and Squair's Grammar; *Le Tour de la France par deux Enfants*.

2. French. Four recitations a week, second semester. Continuation of French 1. Dictation exercises, memorizing of selected passages, conversation. Text: Super's Reader.

3. French. Four recitations a week, first semester; elective in the sophomore year according to the above requirements. Hugo, Balzac, De Musset, and other nineteenth century writers; collateral reading and conversation.

4. French. Four recitations a week, second semester. Continuation of French 3. In addition there will be extensive reading of scientific French, with Luquiens' Popular Science for text-book.

5. French. Three recitations a week, first semester; elective in the junior or senior year of the General Science Course, and in the senior year of the Home Economics Course. Corneille, Racine, La Fontaine; their lives and works; their influence on their contemporaries; the literature and society of their time. Themes and collateral reading.

6. French. Three recitations a week, second semester; open to those who have completed French 5. Moliere and Voltaire; their

lives and writings; their influence on French and English thought; how they were influenced by English writers, particularly Shakespeare. Themes and collateral reading.

## Department of History and Political Science

PROFESSOR HARDING.

The aim of this department is to introduce the student to such studies as may enable him to deal with economic problems and to fulfill his social and political duties; to develop in him the power to use critically and constructively the historical method, and especially to awaken in him an interest in the great field of history and political science and an enthusiasm for personal individual effort. Constant endeavor is made to teach the practical application of the social, political and economic experiences of the race to the problems of modern life.

The text-book is supplemented by lectures and class discussions based upon assigned readings of the original work of students. Students are encouraged in every way to make use of the college library, which is the tool house of this department.

For description of History 1 to 6, see the preparatory department.

7. Medieval History. Three recitations a week, first semester; required in the junior year of the General Science and Home Economics Courses. A general survey of the history of Europe from the barbarian invasions to the close of the fifteenth century. Lectures, text-books, papers, reports and practices in application of the fundamental principles used in testing the value of historical material. Text: Robinson's History of Western Europe.

8. Modern History. Three recitations a week, second semester; required of the same classes as History 7, of which it is a continuation. History of Europe from the opening of the sixteenth century to the present time.

9. American History. Three recitations a week, first semester; elective in the junior or senior year of the General Science Course, and in the senior year of the Home Economics Course; prerequisite, History 7 and 8. A study of constitutional and political development from 1783 to 1829. Lectures, library work, reports, and careful study of assigned sources. (Omitted in 1910-11.)

10. American History. Three recitations a week, second semester; elective in the same classes as History 9, of which it is a continuation. The constitutional and political history of the United States from the beginning of Jackson's administration to the Civil War. (Omitted in 1910-11.)

11. Nineteenth Century History. Three recitations a week, first semester; elective in junior or senior year of the General Science Course, and in the senior year of the Home Economics Course; prerequisite, History 7 and 8. A study of national development and of international relations between 1815 and 1870, prefaced by a brief survey of the French Revolution and Napoleonic Empire. A detailed study of the Restoration, the Revolution of 1848, the Unification of Italy and the formation of the German Empire.

12. Nineteenth Century History. Three recitations a week, second semester; elective in the same courses as History 11, of which it is a continuation; prerequisite, History 11. The internal development of the European nations and their international relations since 1870. In this course particular attention is paid to present day questions of European politics.

13. American Government. Three recitations a week, first semester; elective in the junior or senior year of the General Science Course. An advanced study of federal, state and local government in theory and practice. Lecture, text-book, collateral readings in standard authorities, and the preparation of reports upon assigned subjects.

14. American Politics. Three recitations a week, second semester; elective in the junior or senior year of the General Science Course. A study of the rise, organization and operation of political parties, and of party problems in the United States. This course includes a careful study of party platforms. Text: Woodburn's "Political Parties and Party Problems," supplemented by Macy's "Party Organization and Machinery," and Bryce's "American Commonwealth."

15. Economics. Three recitations a week, first semester; required in the senior year of all the four year courses except the Pharmacy Course. A study of the fundamental laws of economic science. Text-book, supplemented by lectures on special subjects and assigned readings.

16. Sociology. Three recitations a week, second semester; required in the senior year of the Home Economics and General Science Courses. The fundamental principles of social science. Text-book, supplemented by lectures and special reports.

---

## Department of Philosophy

---

PROFESSOR RODEHEAVER.

The aim of this department is, in the elementary courses, to give the student some knowledge of the conditions and methods which give the most efficient results in study; in the Junior



courses, to give a general knowledge of the facts and laws of experience, with special emphasis upon the intimate relations of mind and body and the practical significance of these facts and laws in every day life. The prevailing theories of conduct are studied with chief attention toward encouraging a wholesome view of the leading problems of life which make for the fullest and most efficient living.

The study of education may yield large value to every student, but these courses are designed primarily for those who expect to teach. The graduates of the college who have taken these courses and have had a year's experience in teaching, are entitled to a provisional state certificate, and after two years of successful experience in teaching will be entitled to a state certificate.

1. Logic. Two recitation periods a week, first semester; required in the freshman year in all the courses leading to the Bachelor's degree. This is an elementary course and consists chiefly of lectures with exercises for developing clearness and accuracy in thinking.

2. Logic. Two recitation periods a week, second semester; required in the same courses as 1, of which it is a continuation, with the addition of exercises in inductive reasoning based upon psychological observations and analysis.

3. Psychology. Three recitation periods a week, first semester; required in the junior year of the Agriculture, Home Economics and General Science Courses. The structure and function of the nervous system. Discussion of the different phases of mental activity, especially their origin and function. Class room discussions based upon Angell's Psychology, supplemented by assigned readings, lectures, demonstrations, and experiments.

4. Ethics. Three recitation periods a week, second semester; required in the junior year of the Agriculture, Home Economics and General Science Courses; prerequisite, Philosophy 3. The beginning and development of different views of the moral life; psychological basis; theories of the moral standard; institutions of the moral life; practical problems in private and public morality. Course consists of lectures, discussions, and reports on assigned topics; based upon such texts as Dewey and Tufts, Paulsen, Bowne, and Mackenzie.

5. History of Education. Three recitation periods a week, first semester; elective in the senior year of the Home Economics, Agriculture and General Science Courses; prerequisite, Philosophy 3. Development of aims and methods of education from primitive peoples to modern times, noting their relation to contemporary philoso-



phy and social life. Lectures, discussions and reports on assigned topics; based upon Monroe, Davidson, Kemp and others.

6. The Principles of Education. Three recitation periods a week, second semester; elective in the senior year of the Home Economics, Agriculture and General Science Courses; prerequisite, Philosophy 3 and 5. The aim of this course is to give the student a knowledge of psychological principles as applied to education, rather than to study details of methods. An effort is made to reveal the essential nature and function of education and the kind of technique necessary to secure the best results in teaching. Lectures, discussions and reports; based upon texts of Ruediger, Bagley, Hall, O'Shea and others.

7. Public Speaking. Three recitation periods a week, first semester; required in the sophomore year of the General Science Course. A study of the fundamental conditions for effective speaking, approached from the psychological standpoint, but most attention is given to the study of selected speeches and the delivery of declamations.

8. Public Speaking. Two recitation periods a week, second semester; required of the same class of students as 7, of which it is a continuation. Chief attention is given to practice in extempore speaking.

---

## Department of Mathematics and Astronomy

---

PROFESSOR BROWN, MR. WHITEHEAD.

The general work of this department is planned to cultivate habits of systematic and accurate thinking, as well as facility in making calculations. Independent effort is encouraged to the greatest possible extent, the solutions of problems and original demonstrations forming an important part of each course.

The class work in general astronomy is supplemented by the use of instruments in the observatory. These include a six-inch equatorial telescope, a transit instrument, a sidereal clock and a chronograph.

For description of Mathematics 1 to 6, see the preparatory department.

7. Solid Geometry. Three recitations a week, first semester; required in the Pharmacy and Engineering Courses; elective in the General Science Course, freshman year; prerequisite, Mathematics 6. All the important principles of the subject will be covered. Text: Sanders' Plane and Solid Geometry.

8. Advanced Algebra. Three recitations a week, second semester; required in the Pharmacy and Engineering Courses; elective in

the General Science Course, freshman year; prerequisite, Mathematics 4. Graphs, permutations and combinations, complex numbers, elementary theory of equations, determinants, partial fractions.

9. Plane Trigonometry. Two recitations a week, first semester; required in the freshman year of the Pharmacy, Agriculture and Engineering Courses; elective in the freshman year of the General Science Course; prerequisite, Mathematics 6. The elementary notions of trigonometry; solutions of plane triangles.

10. Plane and Spherical Trigonometry. Two recitations a week, second semester; required in the Engineering Courses, elective in the General Science Course, freshman year; prerequisite, Mathematics 8 and 9.

11. Analytic Geometry and Calculus. Five recitations a week, first semester; required in the Engineering Courses, sophomore year; elective in sophomore, junior or senior year, General Science Course; prerequisite, Mathematics 8 and 9. The greater part of the semester will be devoted to analytic geometry.

12. Calculus. Five recitations a week, second semester; required in the sophomore year of the Engineering Courses, elective in the sophomore, junior or senior year, General Science Course; prerequisite, Mathematics 11. Continuation of Mathematics 11.

13. Analytic Mechanics. Five recitations a week, first semester; required in the junior year of the Engineering Courses, elective in the junior or senior year of the General Science Course; prerequisite, Mathematics 12. The application of analytic geometry and calculus to the solutions of mechanical problems.

14. Analytic Mechanics. Five recitations a week, second semester; elective in the junior or senior year, General Science Course. Continuation of 13.

15. General Astronomy. Four recitations a week, second semester; required in the senior year of the General Science, Home Economics and Engineering Courses; prerequisite, Mathematics 6. The text will be covered and frequent use made of the instruments. Text: Young's Manual of Astronomy.

---

## Department of Physics

---

PROFESSOR MATHEWS, MR. HOY.

From the fact that physics is one of the foundation sciences and that a knowledge of its laws is necessary to every student seeking a scientific training, the department has been well fitted with rooms and appliances to provide this training. Its lecture rooms are well provided with arm-rest chairs. The laboratories

are well lighted and provided with non-vibratory piers. Water, gas and electricity are provided for the recitation rooms and the dark room and laboratories.

This department is housed in the engineering and physics building. Its facilities and equipment for instruction are equal to those of any in the Northwest.

The laboratory equipment includes such expensive pieces as analytical balances, laboratory clock making electrical contact every second, cathetometer, spectrosopes, microscope, photometers, stereopticon and reflectoscope (arc light), standard cells, dynamos, electromotors, transformers, galvanometers, storage battery, induction coils, ammeters, magnetometers, voltmeters, wattmeters, Wheatstone bridges, polariscope, quadrant electrometer, lathes and wireless telegraphy and X-Ray apparatus.

The following subjects are offered in this department:

For a description of Physics 1 and 2, see the preparatory department.

3. General Physics. Three recitation and laboratory periods a week, first semester; required in the sophomore year of the Engineering and Pharmacy Courses, in the junior year of the veterinary group, Agriculture Course; elective in the sophomore, junior or senior year of the General Science Course. Young ladies following the General Science Course may elect Home Economics 4 and 7 instead of Physics 3; prerequisite, Physics 2 and Mathematics 9. Mechanics of solids and fluids and heat with numerous examples. Static electricity and magnetism. Exact measurement of mass, distance, time, calorimetry, etc.; study of electrical and magnetic fields. Texts: Hasting and Beach; Austin and Thwing.

4. General Physics. Three recitations and two laboratory periods a week, second semester; required and elective in the same courses as Physics 3; young ladies pursuing the General Science Course may elect Home Economics 3 instead of Physics 4; prerequisite, Physics 3. Electricity and its applications in the dynamo, motor and transformer, electric light and study of electrical and magnetic fields; nature and velocity of sound, refraction and reflection of light, interference and color, laboratory work on topics mentioned. Texts: Hasting and Beach; Austin and Thwing.

5. Advanced Physics. Four recitations and one laboratory period a week, first semester; elective in the junior or senior year of the General Science Course; prerequisite, Mathematics 12 and Physics 4. Mechanics, kinematics, kinetics, mechanics of fluids and heat and its application; magnetism, static electricity, electrolysis, laboratory work and measurements covering topics mentioned. Texts: Nichols and Franklin, Vols. 1 and 2; Nichols' Laboratory Guide.



6. **Advanced Physics.** Four recitations and one laboratory period a week, second semester; elective to the same class as Physics 6. Induction currents, primary batteries, electric oscillations and waves, nature and motion of sound, physical theory of music, nature and propagation of light, refraction, reflection, interferences, color and polarization; laboratory work. Texts: Nichols and Franklin, Vol. 3; Nichols' Laboratory Guide.

7. **Heat.** Three recitations and one laboratory period a week, first semester; elective in the senior year of the General Science Course; prerequisite, Physics 6. Sensible and latent heat, dynamical generation of heat, thermometry, calorimetry, specific heat, atomic and molecular heat capacities, evaporation, ebullition, vapor densities, cooling, diathermacy, conductivity and dynamical equivalent of heat, laboratory work covering topics mentioned. Text: Preston's Theory of Heat; Maxwell's Heat.

8. **Light.** Three recitations and one laboratory period a week, second semester; elective to the same classes as Physics 7, of which it is a continuation. Shadows and images, spectrum, velocity of light, color, phosphorescence, fluorescence, diffraction, measuring waves, prisms and polarization; laboratory work. Text: Preston's Light.

---

## Department of Botany

---

PROFESSOR OLIVE, MR. WHITE, MR. SARVIS.

In the work of this department, the structure, physiology, classification and pathology of plants, and the fundamental problems of cell structure and functions are studied, as well as the direct application of botanical science to pharmacy and agriculture. This work also helps to serve as foundation for courses in forestry, plant breeding, plant pathology, etc.

The instruction aims primarily to develop the powers of accurate observation and the ability to draw correct conclusions.

Both the elementary and advanced laboratories are equipped with new and modern microscopes and other necessary apparatus for carrying on advanced or original research work. The department also has fairly complete and convenient herbaria of the flowering plants and fungous flora of the northern United States.

1. **General Botany.** Two lectures or recitations and three laboratory periods a week, first semester; required in the sophomore year of the Agriculture, Home Economics and Pharmacy Courses,



elective in the sophomore year of the General Science Course; prerequisite, the work of the freshman year. The general principles of biology as illustrated by plants; a study of the life histories of types of plants, including their physiology and systematic relations.

2. General Botany. Two lectures or recitations and three laboratory periods a week, second semester; required and elective in the same courses as Botany 1, of which it is a continuation; prerequisite, Botany 1.

3. Economic Botany. Three recitation or lecture periods a week, second semester; required in the Sophomore year of the botany group, Agriculture Course; elective in the General Science and Home Economic Courses.

4. Plant Physiology. One recitation and two laboratory periods a week, first semester; required in the junior year of the botany group, Agriculture Course; elective in the same courses as Botany 3; prerequisite, Botany 1 and 2.

5, 6. Mycology and Plant Pathology. Two laboratory and lecture periods a week throughout the year; required and elective in the same classes as Botany 4; prerequisite, Botany 1 and 2. Morphology and classification of the fungi. The plant diseases of economic importance are especially emphasized, together with the methods of prevention or of treatment.

7. Taxonomy of Pteridophytes, Gymnosperms and Angiosperms. Five recitation and laboratory periods a week, second semester; required and elective in the same classes as Botany 4; prerequisite, Botany 1 and 2. The systematic arrangement and classification of the ferns and their allies, and especially of the higher flowering plants. The structure and relationships of weeds, grasses and grains, and other plants of economic importance will be emphasized in the course.

8, 9. Cytology and Botanical Microtechnique. Five recitations and laboratory periods a week, throughout the year; required in the senior year of the botany group, Agriculture Course; elective in the senior year of the General Science Course and in the horticulture, dairy husbandry and agronomy groups of the Agriculture Course; prerequisite, Botany 1, 2 and 4. Lectures, recitations and laboratory work on the general activities, reproduction and nutrition of the plant cell. The theoretical bearing of the subject on heredity, plant breeding, etc. Methods of imbedding, sectioning and staining.

10. Pharmacognosy. Five recitation and laboratory periods a week, second semester; required in the junior year of the Pharmacy Course; prerequisite, Botany 1. The sources, characteristics, histology, identification, etc., of the common drugs.

11, 12. Investigation and Thesis. Three laboratory periods the first semester and five the second semester; required in the senior year of the botany group, Agriculture Course.

## Entomology and Nature Study

PROFESSOR SEVERIN.

The work of this department is conducted by means of lectures, recitations, laboratory and field work. The student is thus afforded not only an opportunity to gain familiarity with the principles and theories discussed in the class room, but is also encouraged to put these theories to the test and verify the principles in the field. In the way of illustrative material, in addition to the general museum and the entomological collections, there are a number of charts, a large number of lantern slides, microscopic slides, and alcoholic and formalin preparations. The botanical department is well provided with all the apparatus necessary for biological work and the equipment will be available for use in this department.

For description of Zoology 1 and 2, see the preparatory department.

3-4. General Entomology. One recitation and one laboratory period a week during the first semester and three recitation and one laboratory period during the second semester; required in the junior year of the Agriculture Course; elective in the junior year of the General Science Course. A general course dealing with the anatomy, physiology, classification and life history of insects. The work of the second semester will be devoted in part to a discussion of some of the more important insect pests and methods of controlling them. This course is designed as an introduction to the practical work in economic entomology offered in courses 5 and 6 and to the systematic work offered in courses 7 and 8.

5-6. Economic Entomology. Two lecture periods a week throughout the year; elective in the senior year of the General Science Course, and in the horticulture, botany and agronomy groups, Agriculture Course; prerequisite, Entomology 3 and 4. A detailed study in the field and lecture room of the chief economic species of insects. The student will be given an opportunity of preparing sprays and gases used in combating insect pests and demonstrations will be offered in the practical applications of the same.

7-8. Systematic Entomology. Two laboratory periods a week throughout the year; elective in the senior year of the General Science Course. This course, while primarily entomological, is designed to be of general use to students of biology. It has for its object not only to get the student acquainted with the more common forms of insect life, but is also designed to give the student an idea of the aims and methods of classification. Each student will be

required to do his own collecting and mounting of insects; the collections of the department will be available to the student at all times for reference work.

9. Household Insects. Two lectures a week, second semester; elective in the senior year of the Home Economics Course. The household insects and related animals that are of economic importance will be especially emphasized in this course, together with methods of extermination.

10. Ornithology. One lecture and one laboratory period or field excursion a week, second semester; elective in the senior year of the Home Economics Course and in the junior or senior year of the General Science Course. The lectures will deal with the various phases of bird life; the laboratory periods are designed to acquaint the student with the anatomy of various types of birds; while the field work will be devoted to studying the birds as they are found in the field, particularly with reference to their field identification, feeding and nesting habits. Each student should provide himself with a field or opera glass and a copy of Florence Merriam Bailey's Handbook of Birds of Western North America.

11. Nature Study. Three recitations a week, first semester; elective in the junior or senior year of the General Science Course and in the senior year of the Home Economics Course. This course is intended primarily for those who expect to teach in the public or high schools. Its object will be to give the nature-point of view and it will be a discussion of methods and material as well as a course in elementary science treated from the biological side.

---

## Department of Zoology

---

DR. MOORE, MR. ALTON.

The work offered in this department is designed, first, to give the student a general knowledge of the principles of animal biology; second to give especial attention to technique and to the development of originality in the individual. Students contemplating the study of medicine may by a judicious selection of subjects in this and other departments secure an equivalent of the first year's work offered by the medical colleges.

The department is adequately equipped with specimens and apparatus, to which frequent additions are made.

For description of Zoology 1 and 2, see the preparatory department.

3, 4. General Zoology and Physiology. Two recitations and three laboratory periods a week, first and second semesters; required in



the sophomore or junior year of the Agriculture Course, and in the junior year of the Home Economics Course; elective in the sophomore, junior or senior year of the General Science Course; prerequisite, Art 1 and all the subjects below the sophomore year.

a. General Zoology. A study of type forms of invertebrates and vertebrates, and the elements of histology and embryology. Texts and references: Hertwig's Manual of Zoology; Parker and Haswell's Text-book of Zoology; Lange's Comparative Anatomy.

b. Physiology. This subject continues throughout the last half of the second semester. Lectures, recitations, demonstrations, and required readings in advanced human physiology. Texts and references: Thornton's Human Physiology; American Text-book of Physiology; Landois' Human Physiology; Verworn's General Physiology.

c. Veterinary Physiology. Required of students of agriculture during the last half of the second semester instead of human physiology. Text: Paton's Essentials of Physiology.

5, 6. Anatomical Methods. Three recitations and two laboratory periods a week, first and second semesters; required in the junior year of the Pharmacy Course. This subject is intended to acquaint students preparing for the study of medicine with anatomical nomenclature, and methods of dissection. It includes the study of the anatomy of the cat, with special reference to physiology. Texts: Davidson's Mammalian Anatomy; Riegart and Jennings' Anatomy of the Cat; Morris' Human Anatomy.

7, 8. Histology. Five recitations and laboratory periods a week, first and second semesters; required in the senior year of the veterinary group, Agriculture Course, elective in the junior or senior year of the General Science Course; prerequisite, Zoology 3 or 5. The structure of the cell and the tissue elements together with microtechnique during the first semester; vertebrate organology, the microscopic structure of vertebrates during the second semester. Texts and references: Bohm-Davidoff's Text-Book of Histology; Wilson's The Cell; Stohr's and Szymonowics-MacCallum's Text-books of Histology.

9, 10. Embryology. Five recitations and laboratory periods a week, first and second semesters; elective in the junior or senior year of the General Science Course; prerequisite, Zoology 3. This course is designed to meet the needs of those who desire to gain an insight into embryological problems. Besides the study of the development of a number of forms, both vertebrate and invertebrate, the work will include the study of the organization, maturation and fertilization of the egg. Texts and references: Hertwig's Text-book of Embryology; Foster and Balfour's Elements of Embryology Korscheldt and Heidns, Text-book of Comparative Embryology.

11, 12. Comparative Anatomy of the Vertebrates. Five recitations and laboratory periods a week, first and second semesters; elective in the junior or senior year of the General Science Course;



---

prerequisite, Zoology 5 or 7. An elective designed for those students especially interested in anatomy and zoology. Text and references: Wiedersheim's Comparative Anatomy; Flower's Osteology of the Mammalia; Jayne's Mammalian Anatomy; Huxley's Manual of the Anatomy of the Vertebrate Animals.

Bacteriology. See Department of Veterinary Medicine, course 6.

---

## Department of Chemistry

---

PROFESSOR SHEPARD, MR. KOCH, MR. DUTCHER.

This department is equipped with the latest and most approved appliances for instruction.

The student upon beginning the subject is assigned a desk in the main laboratory. This desk is supplied with a set of reagent bottles, gas and water fixtures. In addition to these a supply of all needful apparatus, such as test tubes, generating flasks and the like are furnished. The main laboratory, which is located on the first floor of the Chemistry and Pharmacy Building, accommodates sixty-four students all working at the same time.

Upon completing the necessary elementary work the student now finds a quantitative laboratory at his disposal. This laboratory accommodates twenty students working together. It is supplied with all quantitative apparatus, such as precipitation flasks, desiccators, lamps and crucibles.

In connection with the quantitative laboratory is a balance room supplied with high grade Trømer quantitative balances. The work is so planned that the student has laboratory work together with didactic instruction throughout the course.

The experiment station laboratories are also located at this college, and their costly and technical appliances and the practical work in constant progress there are within reach for instruction.

1. Elementary Inorganic Chemistry. Five recitations and laboratory periods a week, first semester; required in the freshman year of all the courses leading to a degree; prerequisite, Physics 2. History of chemistry, elements, compounds, symbols, valence, atomic weights, chemical equations, oxygen, hydrogen, nitrogen, chlorine, bromide, fluorine, iodine, sulphur, phosphorus, silicon and their

compounds. Bases, salts, acids and alkalies. The metals and their compounds, separation of metals, groups of metals and uses of their compounds. Detection of the non-metallic elements and their compounds. Text: Shepard's Elements of Chemistry.

2. Elementary Organic Chemistry. Five recitations and laboratory periods a week, second semester; required in the freshman year of all the courses leading to a degree; prerequisite, Chemistry 1. The principal classes of organic compounds, the characteristics and properties of each class and the uses of their various compounds. Detection of principal metals and the working of a list of unknowns; the detection of principal organic compounds. Text: Shepard's Elementary Organic Chemistry.

3. Quantitative Chemistry. Five recitation and laboratory periods a week, first semester; required in the sophomore year of the Agriculture, Home Economics and Pharmacy Courses; elective in the sophomore, junior or senior year of the General Science Course; prerequisite, Chemistry 1 and 2. The apparatus and its uses. Explanations of methods of quantitative determinations and reports of students' analyses. The quantitative analyses of typical chemical compounds, e. g., calcite, magnesium sulphate, metallic ores, coal, etc. Text: Olsen's Quantitative Chemistry.

4. Chemistry and Physiology of Foods. Five recitations and laboratory periods a week, second semester; required in the sophomore year of the Home Economics Course and of the chemistry and veterinary groups, Agriculture Course; elective in the junior or senior year of the General Science Course and in the senior year of the dairy husbandry group, Agriculture Course; prerequisite, Chemistry 1, 2 and 3. Food nutrients, chemical characteristics and offices of same, physiology of same, metabolism, balanced rations, standard dietaries. Study of food adulteration. Experiments in digestion of foods, offices of digestive secretions. Detection of adulterants, coloring matter and preservatives.

5. Agricultural and Sanitary Analysis. Five recitation and laboratory periods a week, first semester; required in the senior year of the chemistry group, Agriculture Course; elective in the junior or senior year of the General Science Course, and in the senior year of the dairy husbandry group, Agriculture Course; prerequisite, Chemistry 1, 2 and 3. Analysis of foods, feeding stuffs, dairy products, water, etc. Use and analysis of disinfectants, germicides, etc. Lectures, Official Methods American Association of Official Agricultural Chemists.

6. Agricultural Chemistry. Three recitations a week, second semester; required in the junior year of the animal husbandry group, in the senior year of the chemistry group, Agriculture Course; elective in the junior or senior year of the General Science Course, and in the senior year of the dairy husbandry and agronomy groups,

Agriculture Course; prerequisite, Chemistry 1, 2 and 3. Text: Johnson's Agricultural Chemistry.

7. Industrial Chemistry. Three recitations a week, first semester; required in the senior year of the chemistry group, Agriculture Course; elective in the junior or senior year of the General Science Course; prerequisite, Chemistry 1, 2 and 3. Chemistry of manufacturing glass, paper, sugar, petroleum, explosives, acids, water, air, mortars, pigments, photography, alkalies and gases. Demonstrations of examples including water pollution, purification, artificial illumination, petroleum, testing fermentation, air contamination, disinfection, ventilation, bleaches and dyeing. Text: Thorpe's Industrial Chemistry.

---

## Department of Pharmacy

---

PROFESSOR WHITEHEAD.

The work of this department is intended primarily to teach thoroughly young men and women the science of pharmacy. The work of the preparatory department is prerequisite to the subjects of this department.

The student finishing the two-year course in Pharmacy may receive the degree of Pharmacy Graduate (Ph. G.). This is the only course of the kind offered in the state and receives the hearty commendation of the State Board of Pharmacy.

This department meets both the preparatory and professional requirements of the New York Educational Department with which it is registered in full. It is also a member of the American Conference of Pharmaceutical Faculties.

This line of work offers many inducements to young men. The requests of the druggists of the state for our graduates are far in excess of the supply and the pure food and drug laws have opened up a new field for young men who are competent drug and food assayists.

The two years of pharmacy work may all be applied towards the degree of Bachelor of Science which is given upon completion of the four-year course in Pharmacy. This longer course is recommended to those who intend to take up the study of medicine or dentistry, or who wish to prepare for teaching the sciences in the high schools of the state.



The fees for work in this department are the same as for other college work, *i. e.*, six dollars tuition and two dollars for each laboratory period per semester.

With the exceptions of 10 and 11 the following subjects are all required for both the degree of Pharmacy Graduate and the degree of Bachelor of Science in Pharmacy.

1. Pharmacy Latin. Five recitations a week, first semester, junior year. The subject is taught with special reference to its application in pharmacy. The vocabulary employed is strictly pharmaceutical. Text: Robinson's Grammar of Pharmacy and Medicine.

2. Materia Medica. Five recitations a week, first semester, senior year; also elective in the General Science Course. Medicinal properties, doses and poisonous effects of the various medicines, together with the antidotes which the pharmacist may be required to administer in an emergency, will receive full and careful treatment. Text: Potter's Materia Medica, Pharmacy and Therapeutics.

3. Materia Medica. Five recitations a week, second semester, senior year. Continuation of Pharmacy 2.

4. Pharmacy. Five recitations a week, first semester, senior year; prerequisite, Chemistry 2. Forms and uses of pharmaceutical apparatus, weighing by apothecary and metric systems, specific gravity of solids and liquids, heating apparatus, determination of boiling and melting points, distillation, comminution, solution, precipitation, filtration crystallization, percolation, and study of official medicines, waters, syrups, mucilages, mixtures, spirits, elixirs, liniments, infusions, tinctures, fluid extracts, oleoresins and extracts. Text: Remington's Practice of Pharmacy.

5. Pharmacy Laboratory. Three laboratory periods a week, first semester, senior year. Preparation of waters, syrups, mucilages, etc., mentioned in Pharmacy 4, and must be taken up in connection with it. Text: Remington's Practice of Pharmacy.

6. Pharmaceutical Problems. Two recitations a week, first semester, senior year. Relationship of metric, apothecary, and imperial systems of weights and measures, specific gravity, specific volume percentage problems, concentration and dilution, alligation and chemical problems. Text: Olberg's Pharmaceutical and Chemical Problems.

7. Pharmacy. Five recitations a week, second semester, senior year; prerequisite, Pharmacy 4 and 5. Official inorganic salts and their compounds, solutions, emulsions, powders, pills, ointments, and plasters; reading prescriptions. Texts: Remington's Practice of Pharmacy, Ruddiman's Incompatibilities in Prescriptions.

8. Pharmacy Laboratory. Five laboratory periods a week, second semester, senior year; prerequisite, Pharmacy 5 and 6. Compounding of prescriptions, making of inorganic salts, solutions, emulsions powders, pills, reading and compounding prescriptions. Must



be taken same term as Pharmacy 7. Texts: Remington's Practice of Pharmacy, Ruddiman's Incompatibilities in Prescriptions, Olberg's 1,500 Prescriptions, National Formulary.

9. Volumetric Analysis and Drug Assaying. Five recitations and laboratory periods a week, second semester, senior year; also elective in the sophomore year of the General Science Course; prerequisite, Chemistry 3. There are at present in the U. S. Pharmacopoeia 149 volumetric and 35 gravimetric assays. In this subject we endeavor to give enough of this work to enable a student to make any of these assays in an intelligent and accurate manner. The students are required to make their own volumetric and indicator solutions. A short course in urine analysis is given in connection with this work. Texts: U. S. Pharmacopoeia, Schimpf's Volumetric Analysis, Lyon's Pharmaceutical Assaying; lecture notes by the teacher.

10. Veterinary Materia Medica. Three recitations a week, second semester; required in the junior year of the veterinary group, Agriculture Course. A study of the medicinal properties, doses, and uses of the principal drugs used in veterinary medicine. Texts: Winslow's Veterinary Materia Medica and Therapeutics.

11. Chemical Toxicology. Five laboratory periods a week, first semester; prerequisite, Pharmacy 3 and 9. Separation and identification of poisons. Texts: Reeses' Medical Jurisprudence and Toxicology, Antenrieth's Detection of Poisons, Blyth's Poisons, their Effect and Detection.

---

## Department of Music

---

HENRY H. LOUDENBACK.

Piano and Theoretic Branches.

FRANCIS J. HAYNES.

Voice and Band Instruments.

CARL CHRISTENSEN.

Violin, Stringed Instruments.

RUTH WESTCOTT.

Assistant in Piano and Harmony.

### DEPARTMENTS.

1. Piano, piano ensembles.
2. Voice, choral organizations.
3. Violin, stringed instruments, orchestra.
4. Band instruments.
5. Theoretical studies, as harmony, history of music, etc.

**FREE ADVANTAGES.**

1. Faculty recitals.
2. Choral organizations.
3. Piano technic classes.
4. Elements of music class.
5. History of music class.
6. Harmony class.
7. Composition.
8. Theory of interpretation and music forms.
9. Orchestra.
10. Pupils' recitals.
11. Piano practice.
12. Sight singing class.

**UNIVERSITY OF ILLINOIS****PRESIDENT'S OFFICE**

The demand at the present time is for men and women who are equally developed morally, mentally and physically.

The chief function of music is to express and excite emotion, hence the pursuance of the study of music tends to develop the emotional powers, and to refine and uplift the moral qualities. As the proper study of music requires as much mental concentration as any other line of study, it is equally strengthening to the intellect.

The aim of this department is to furnish the best methods for the acquirement of a thorough musical education and to develop "thinking" musicians, not merely musicians of "feeling" alone.

Opportunity is offered, in connection with the College, for a liberal and practical education, and the heads of the various departments are particular to urge students of music to avail themselves of this opportunity. A mere technical training will not suffice. The most successful teachers and students are those who seek the broadest intellectual development.

The prices charged for tuition in the music department are very reasonable when one considers the many free advantages that are offered.

The faculty consists of teachers of superior ability who are specialists in their respective lines.

The department of music with its various advantages offers almost as good results as can be obtained in the acknowledged centers of musical learning.

**EXPENSES.**

The following fees will be charged per semester for instruction under the various instructors:

Piano (professor of music), two half hour lessons a week, \$18.00.

Piano (assistant), two half hour lessons a week, \$15.00.

Voice culture (head of voice department), two half hour lessons a week, \$18.00.

Violin, viola, cello (head of violin department), two half hour lessons a week, \$18.00.

Theoretical branches—Free to all eligible students enrolled in department of music, and to those electing them in the General Science and Home Economics Courses.

Solfeggio sight singing class, five twenty minute periods a week, free tuition.

Piano practice—Free to all students enrolled in the department of music.

Clavier rental—One hour per day, one semester, \$3.50.

Special fees will be charged short course students who desire to pursue any of the branches in the department of music.

Diplomas, \$2.00.

**RECITALS.**

Public and private recitals are given frequently by the various members of the faculty and by students. Private recitals, in which all students are allowed to participate are given every week. Students are required to take part in any of these recitals, if prepared. This serves as a special impulse towards earnestness and many accomplish much better work under such an incentive. Aside from this, frequent appearance before others tends to give the student that necessary self-control and repose without which it is impossible to become a finished performer. Attendance at all recitals is obligatory upon all students enrolling in either the academic or collegiate courses.

**CHORAL ORGANIZATION AND ORCHESTRA.**

A male glee club and a ladies' chorus are organized at the beginning of the year, to which any student or faculty member of the college is eligible at the recommendation of the instructor in voice. The two separate organizations are combined the last



half of the year as a choral union, the intention being to render some of the choral masterpieces and oratorios and cantatas. All vocal students, and piano and violin students who are eligible, are required to attend the choral union rehearsals unless excused by the chorus leader.

A college orchestra is also maintained, to which any student who is qualified is eligible.

#### PLAN OF STUDY.

The plan of study consists of two general courses, the Academic and the Collegiate Courses in Music, and the Preparatory Course.

The Preparatory Course is designed for beginners or for those who have not been thoroughly trained in the rudiments of music, and prepares the student for entrance into the Academic or Collegiate Courses. The time generally required to prepare for entrance into the courses mentioned will vary from one to two years.

The aim of the Academic Course is to enable those students who do not care to complete a course of music leading to graduation to become proficient as performers, and to give them a fair knowledge and appreciation of the educative principles of music. At the completion of this course the student will be granted a certificate of proficiency or attainment.

The Collegiate Course leads to graduation and consists of three years' work. Students upon completing the requirements for the second year's work will be granted a teacher's certificate, and upon completing the third year's work will receive a diploma.

It is impossible to give a definite outline of the course of study to be followed, as it will vary accordingly to the pupil's ability. However, some things must be studied, and beyond that the instruction is adapted to the personal needs of each student. The work offered in the different lines of music is described below.

#### PIANO-FORTE.

The methods of technical instruction here employed are known as the Virgil clavier and the Leschetizky methods. The claviers are judiciously used in connection with these methods



and each student is required to practice a certain amount of time each day upon one of these instruments.

The three all-important factors in artistic piano playing are a positive technic, a musical touch and repose, and the clavier helps the student acquire these quickly by demanding greater powers of concentration of the will.

The preparatory work in piano embraces eight distinct subjects: (a) mind training; (b) physical development; (c) ear training; (d) technic; (e) rhythmic studies; (f) sight reading; (g) sight playing; (h) memorizing.

Selection will be made from the following list of studies in pursuing this course:

Kohler Studies; Czerny (Liebling's Book I); Gurlitt studies; Loeschhorn, Op. 65 and 52; Kunz, 200 canons; easy studies by Bach; Kuhlau's Sonatinas; MacDougall's studies in melody playing; easy pieces by modern composers and masters also. Other studies by good composers, not mentioned, may be used.

The piano work required for graduation in the Collegiate Course in Music extends throughout three years and is as follows:

#### **First Year.**

Heller, selected studies (Presser edition); Czerny, (Liebling's Book II); Duvernoy, Op. 120; Henning's Fugues and Fugettas; Czerny Op. 553 (Octaves); Bach's two voiced inventions; Cramer-Buelow; Beethoven, variations; Beethoven, Sonata, Op. 49; Mozart Sonata; piano solos by modern and romantic composers.

#### **Second Year.**

Bach inventions (three voiced); Bach and easy Fugues and Preludes; pedal studies; Beethoven sonata, Op. 79; Czerny, Op. 740; Mendelssohn, Song Without Words; Kullak octaves; Moszkowski's scales; solos by Grieg, Schubert, Chopin, Schumann and modern composers; first or last movement of a concerto, ensemble work.

#### **Third Year.**

Bach, well-tempered clavichord; Chopin, Op. 10 and 25; Concerto—Mozart, Beethoven, Mendelssohn, or some other composer; Kullak, octave studies; Suite—Grieg or Schumann; Liszt, transcription and original compositions; ensemble work; solos by the masters, both modern and classical; Sonata—Beethoven, Scarlatti or Schubert. A public program of from one hour and thirty minutes to one hour and forty-five minutes in length, to be played in public, unassisted and from memory, will be required of the applicant.

Post graduate work is also offered in this department in the following studies:

Czerny, School of Virtuosity; Bach, organ fugues transcribed by Liszt; Bach—partitas and suites; Scarlatti's sonatas; Chopin, etudes and compositions; Schubert, sonatas and impromptus; Schumann, noveletten. Selections by Brahms, Rubinstein, Henselt, Moszkowski and others. Beethoven sonata; Concertos—Beethoven, Rubinstein, Chopin and others.

### VOICE.

The preparatory work is as follows:

Simple exercises in tone placement and breath control. Interval study. Scales and Arpeggio. Concone School, Neidlinger and Seiber Vocalises. Simple songs for application of principles. Class work, Solfeggio.

The work in voice required for graduation in the Collegiate Course in Music scheduled below extends throughout three years, as follows:

#### First Year.

Tone placement and breath control. Scales and Arpeggios; Legato and Stacatto; Concone daily exercises and vocalises. Panofka, Lamperti and Bordogni vocalises. Song study in phrasing and interpretation. Class work, Solfeggio and choral.

#### Second Year.

Tone placement and breath control. Daily exercises by Bonaldi, Marchesi and Lablache; vocalises by Panofka and Nava; Spicker Masterpieces; Vaccai Italian studies. Study of the best Standard and Modern Classic Songs. Class work, Normal work in Solfeggio and Methods (optional) and choral.

#### Third Year.

Study of trill and other musical embellishments. Velocity studies by Giraudet, Viardot and others. Spicker masterpieces; Lamperti studies in Bravura; Bordogni vocalises. French, German and Italian songs. Oratorio and operatic arias. Formation of repertory. Class work, choral.

### VIOLIN.

The preparatory work is as follows:

Position tone production on open strings; most important rudiments of musical theory in general; Hofmann's Violin School, Book I; Duets by Gebauer and Mazas; easy solos by miscellaneous composers for violin with piano accompaniment.

The work in violin required for graduation in the Collegiate Course in Music scheduled below extends throughout three years, as follows:

**First Year.**

Two octave scales in all major and minor keys. Kayser's Etudes Op. 20, Book I; Wohlfart Studies, Op. 45, Book I; Mazas, Op. 38, Duos for Violin and Piano, Book II; miscellaneous solos for violin with piano accompaniment.

**Second Year.**

Three octave scales in all major and minor keys; Kayser's Etudes Op. 20, Book I; Wohlfart Studies, Op. 45, Book I; Mazas, Op. 38, technical studies; Schubert Sonatinas, Op. 137, for violin and piano; miscellaneous solos for violin with piano accompaniment.

**Third Year.**

Etudes by Kreutzer, Mazas, Dont and Rode; Schradiecke's technical studies; Sonatas by Mozart and Beethoven; miscellaneous solos by Wieniawski, Mendelssohn, De Beriot, etc.; Concerto by Viotti, De Beriot, etc.

**THEORY OF MUSIC.**

The subjects along this line extend throughout the three years of the Collegiate Course in Music and are as follows:

**First Year.****First Semester.**

1. Elements of Music. Two recitations a week. Principles of notation; study of rythm, mensural drills; study of dynamic symbols, abbreviations, etc.

2. Elementary Harmony. Two recitations a week; scale building, diatonic and chromatic, drills in recitation of scales and chords; interval study; formation of major and minor triads; construction of seventh chords; key and chord relationship; ear training and dictation.

**Second Semester.**

3. Elements of Music. Two recitations a week. Musical nomenclature; movement; scale and interval study; ear drills; dictation.

4. Elementary Harmony. Two recitations a week. Chord analysis, simple part writing and study of chord succession; study of dominant seventh, minor ninth and diminished seventh chords and their resolutions; practical keyboard work and ear drills.

**Second Year.****First Semester.**

5. Harmony. Two recitations a week. Part writing in four parts, open and closed harmony, study of triads, seventh chords and their resolutions, chords of the augmented sixth, chords and their resolutions, and practical keyboard work.

6. Interpretation of Music. Two recitations a week; elective in the senior year of the Courses in General Science and Home Econom-



ics. Accent, motive, phrases, etc.; slur and uses; punctuation of phrase, period, etc.; modes of punctuation, cadences; various kinds of periods; musical devices and details; nuance and ornamentation, signs and symbols; rythm; movement; thematic style; lyric style; harmonic style. Text: Goodrich's Theory of Interpretation.

7. History of Music. Three recitations a week; elective in the senior year of the Courses in General Science and Home Economics. Purpose of study; music of ancients; music of Greeks; ecclesiastical systems; notation; music outside the church; Polyphonic Era; various schools; church polyphony music reform; musical instruments; organ and early organists; beginning of opera and oratorio; Neapolitan school; early singing and singers; French and English opera; German opera; evolution of the piano-forte; early English and French clavier schools; German polyphonic clavier school; German sonata composers to Haydn. Text: Baltzell.

#### Second Semester.

8. Harmony. Two recitations a week. Melody writing and harmonizing of a given melody, modulation and improvisation in a given key. Harmonic and melodic analysis of the classics. Practical keyboard work.

9. Interpretation of Music. Two recitations a week; elective in the senior year of the Courses in General Science and Home Economics. Discord and dissonance; harmonic influence; accompaniment; style and expression; interpretation in general; fugue, tone color, epochs in music; dance forms, modern and classic; miscellaneous forms; romantic forms; mixed forms; rondo form; sonata form; symphonic form; overture, concerto, etc.; song forms, etc.

10. History of Music. Three recitations a week; elective in the senior year of the Courses in General Science and Home Economics. Haydn, Mozart, Beethoven; Beethoven and sonata; violin and makers, violin playing and violin music; orchestra and absolute music; romantic opera; Italian school of 19th century; Wagner's music dramas; other schools; piano playing and composition; Clementi to Field; Romantic school and its masters; pianists and teachers since Liszt; Oratorio after Mendelssohn; symphonic poem in Germany; German opera since Wagner; old and new schools in France; musical regeneration in Italy, England and the Netherlands; National schools, Bohemia and Scandinavia; music in the United States; American composers; musical education.

#### Third Year.

##### First Semester.

11. Advanced Harmony. Three recitations a week. Melody writing. Harmonizing of melodies; improvisation; single and double counterpoint.

##### Second Semester.

12. Advanced Harmony. Three recitations a week. Canon and fugue; analysis of fugues; original composition.



13. Psychology and its Relation to Music. Two recitations a week. The object of this class is to study the application of psychological principles to the study of music. The different subjects to be discussed are: nature of music; musical faculty; concept mass and psychic life; means of musical expression; habit; association; memory; imagination; the feelings and emotions; the will.

### COLLEGIATE COURSE.

Students desiring to pursue this course must have completed the requirements for admission to the freshman year in college:

#### First Year.

##### First Semester—

Elements of Music, a 2.....	Theory of Music	1
Elementary Harmony, a 2.....	Theory of Music	2
Piano technic (piano students), a 1.....		
Piano, violin or voice, a 2.....		
Piano, (violin or voice students), a 2.....		
Sight singing, a 5.....		
One of the following as an elective:		
Rhetoric, a 4.....	English	7
German, a 4.....	German	1
French, a 4.....	French	1

##### Second Semester—

Elements of Music, a 2.....	Theory of Music	3
Elementary Harmony, a 2.....	Theory of Music	4
Piano technic (piano students), a 1.....		
Piano, violin or voice, a 2.....		
Piano, (violin or voice students), a 2.....		
Sight singing, a 4.....		
Military, 3.....		
Elective, a 4.....		
Rhetoric, a 4.....	English	8
German, a 4.....	German	2
French, a 4.....	French	2

#### Second Year.

##### First Semester—

Harmony, a 2.....	Theory of Music	5
Interpretation and music forms, a 2.....	Theory of Music	6
History of Music, a 3.....	Theory of Music	7
Piano, voice or violin, a 2.....		
Piano technic (piano students), a 1.....		
Military, 3.....		
Elective, a 4.....		
Chaucer and History of English Language, a 4.....	English	9
German, a 4.....	German	3
French, a 4.....	French	3

**Second Semester—**

Harmony, a 2.....	Theory of Music	8
Interpretation and Music forms, a 2.....	Theory of Music	9
History of music, a 3.....	Theory of Music	10
Piano, voice or violin, a 2.....		
Piano technic (piano students), a 1.....		
Military, 3.....		
Elective, a 4.....		
Elizabethan drama, a 4.....	English	10
German, a 4.....	German	4
French, a 4.....	French	4

**Third Year.****First Semester—**

Advanced harmony, a 3.....	Theory of Music	11
Psychology, a 3.....	Philosophy	1
Piano, violin or voice, a 2.....		
Piano technic (piano students), a 1.....		
Vocal culture (piano or violin students) a 2.....		
Military, 3.....		
Elective .....		
Advanced rhetoric, a 2.....	English	11
German, a 3.....	German	5
French, a 3.....	French	5

**Second Semester—**

Advanced Harmony, a 3.....	Theory of Music	12
Psychology and its relation to music.....	Theory of Music	13
Piano, violin or voice, a 2.....		
Piano technic (piano students), a 1.....		
Military, 3.....		
Elective .....		
Advanced rhetoric, a 2.....	English	12
German, a 3.....	German	6
French, a 3.....	French	6

**ACADEMIC COURSE.**

Any student wishing to pursue this course in full must have completed the eighth grade of the public schools and take each of the subjects named below:

**First Year.****First Semester—**

Elements of music, a 2.....	Theory of Music	1
Sight singing, a 4.....		
Piano, voice or violin, a 2.....		
Piano technic (piano students), a 1.....		

---

Piano, (violin students), a 2.....	
Composition, a 5.....	English 1
Arithmetic, a 5.....	Mathematics 1
Latin, a 5.....	Latin 1
Military, 3.....	

**Second Semester—**

Elements of music, a 2.....	Theory of Music 2
Sight singing, a 4.....	
Piano, voice or violin, a 2.....	
Piano technic (piano students), a 1.....	
Piano (voice students), a 2.....	
Composition, a 5.....	English 2
Algebra, a 5.....	Mathematics 2
Latin, a 5.....	Latin 2
Military, 3.....	

**Second Year.****First Semester—**

Elementary harmony, a 2.....	Theory of Music 3
Piano, voice or violin, a 2.....	
Piano technic (piano students), a 1.....	
Piano, (violin students), a 2.....	
Composition and rhetoric, a 5.....	English 3
Algebra, a 5.....	Mathematics 3
Latin, a 5.....	Latin 3
Military, 3.....	

**Second Semester—**

Elementary harmony, a 2.....	Theory of Music 4
Piano, voice or violin, a 2.....	
Piano technic (piano students), a 1.....	
Piano, (violin students), a 2.....	
Composition and rhetoric, a 5.....	English 4
Algebra, a 5.....	Mathematics 4
Latin, a 5.....	Latin 4
Military, 3.....	

**Third Year.****First Semester—**

Interpretation and music forms, a 2.....	Theory of Music 6
Piano, voice or violin, a 2.....	
Piano technic (piano students), a 1.....	
Composition and English Literature, a 5.....	English 5
Elementary physics, a 3, b 2.....	Physics 1
Military, 3.....	

**Second Semester—**

Interpretation and music forms, a 2.....	Theory of Music 9
Piano, voice or violin, a 2.....	

---

Piano technic (piano students), a 1.....	
Composition and literature, a 5.....	English 6
Elementary physics, a 3, b 2.....	Physics 2
Military, 3.....	

N. B.—The preparatory work required for entrance to the Academic Course in either piano, violin or voice is the same as for the Collegiate Course.

The piano work required for the completion of the Academic Course in Music extends throughout three years and is as follows:

#### First Year.

Heller, Op. 47; Duvernoy, Op. 120; Mozart sonata; Czerny, (Leibling's Book II); piano solos by modern and romantic composers; easy pieces by Bach.

#### Second Year.

Hennings fuguls and fugettas; pedal studies; Mendelssohn, two songs without words; Czerny, Op. 553; Beethoven variations, solos by Grieg; Schubert, Schumann and other modern writers.

#### Third Year.

Bach, little preludes and fugues; Kullak octaves; Beethoven sonata; Czerny, Op. 740; solos by Weber, Chopin, Field, Schumann and others.

The three years work in violin required for completion of the Academic Course is as follows:

#### First Year.

Blumenstengel, scale studies; Kayser, Op. 44, studies; Mazas, Op. 38, Book I, sonatinas for violin and piano; miscellaneous solos with piano accompaniment.

#### Second Year.

Two octave scales in all major and minor keys; De Beriot's Method, Book I, for study of the positions; Wohlfart Studies, Op. 45, Book I; Duets by Mazas and Kalliwoda; miscellaneous solos with piano accompaniment.

#### Third Year.

Three octave scales in all major and minor keys; Kayser's Etudes, Op. 20; Wohlfart, Op. 45, Book II; Denda, Op. 74, School of Mechanism; solos with piano accompaniment by Danclo, De Beriot, Bohm, Wieniawski and others.

The following work will be required in voice for completion of the three year Academic Course:

#### First Year.

Tone placement and breath control. Scales and Arpeggio; Legato and Stacatto. Daily exercises by Pinsuti, Nava and Behnke; Neid-



linger and Sieber vocalises; Concone School. Simple songs for application of principles. Class work—Solfeggio and choral.

#### Second Year.

Tone placement and breath control. Concone daily exercises; vocalises by Concone, Panofka, Bordogni and Lamperti. Song study in phrasing and interpretation. Class work—Solfeggio and choral.

#### Third Year.

Tone placement and study of musical embellishments. Daily exercises by Bonaldi, Marchesi and Lablanche; vocalises by Nava, Panofka, Sieber, Spicker masterpieces, Vaccai Italian studies. Modern and classic songs; interpretation. Class work—Normal work in Solfeggio (optional) and choral.

---

## Department of Art

---

MISS CALDWELL, MISS GODDARD.

The aim in arranging the subjects in this department has been to offer such work as shall correlate with other college courses in becoming a means to a general education. The object of the work is to cultivate an appreciation of beauty and to develop technical skill.

The department is equipped with a good collection of casts and photographs, and with such tools as are necessary for class work.

A diploma is given to students who satisfactorily complete a course in academic drawing and painting, consisting of Art 1, 2, 6, 7, 8, 9 and 10, or a course in decorative design and handicraft, consisting of Art 1, 2, 4, 5, 6, 7, 11.

The time necessary to secure a diploma depends on the ability of the student, three years being an average length of time, although the work may be extended over a longer period and carried with a regular college course.

For description of Art 1 and 2 see the preparatory department.

3. Theory of Design. Two recitations a week, second semester; required in the freshman year of the Home Economics Course; prerequisite, Art 1. This subject treats of the principles of design and their practical application in the home. The history of ornament is briefly reviewed.

4. Theory and Practice of Design. Four recitations and laboratory periods a week, first semester; elective in the senior year of the General Science Course; prerequisite, Art 1. Two periods a week

for lectures and criticism of original designs and three periods for the carrying out of the designs in various crafts, such as leather and metal work, and wood-carving.

5. Theory and Practice of Design. Four recitations and laboratory periods a week, second semester; elective in the senior year of the General Science Course; prerequisite, Art 1 and 4. Continuation of Art 4, with the addition of the study of historic ornament.

6. Art History. Two recitations a week, first semester; required in the Home Economics Course, elective in the General Science Course, senior year. History of architecture and sculpture.

7. Art History. Two recitations a week, second semester; required in the Home Economics Course, elective in the General Science Course, senior year. History of painting. Reference books in the general library, and a collection of photographs in the department furnish material for this course.

8. Antique Class. Five hours a week, first and second semesters; elective to students pursuing special work in art; prerequisite, Art 1 and 2. Study of heads from the antique in full light and shade for construction and modelling; figure drawing from the antique; sketching from life.

9. Study of Values. Five hours a week, first and second semesters; elective to students pursuing special work in art; prerequisite, Art 1 and 2. Value studies in charcoal and still-life as preparatory work for painting.

10. Painting. Two laboratory periods a week, first and second semesters; elective to students pursuing special work in art; prerequisite, Art 9. Still life and flowers in oil, pastel and water-color.

11. Design and Handicraft. Four hours a week, first and second semesters; elective to students pursuing special work in art; prerequisite, Art 5. Plant and animal forms in designs, original designs in color to be applied in the crafts, and in needle-work in the home economics department. The crafts offered are leather, metal-work, jewelry, wood carving, stenciling, pyrography and basket-weaving.

12. Normal Course. Five hours a week, first and second semesters; elective to college students; prerequisite, Art 1. In this course such work is given in drawing, color, and design, as will be an aid to students intending to teach in the public schools. Outlines for the different grades are discussed.

---

## Department of Military Science and Tactics

---

CAPTAIN CHRISMAN, COMMANDANT.

The work of this department is conducted in accordance with War Department orders promulgated pursuant to Acts of Congress.

Instruction in military science and tactics in educational institutions throughout the United States forms a part of the present general system of military training; its function is to impart to the college youth of the land knowledge of the elements of military science and the duties of the soldier in the garrison and in the field in order that the people may receive the benefit of more efficient service when final resort to arms to sustain the national honor or to enforce the laws shall become necessary.

Direct benefits of lasting value are received by the individual cadet which contribute to strengthen his physique and mentality, the better to fit him for the duties of life.

The instruction is both practical and theoretical, as follows:

#### **PRACTICAL.**

Infantry drill regulations; firing regulations for small arms; field service regulations; manual of guard duty. Three hours a week required for all able bodied male students in the sophomore, freshman and preparatory classes and special students; optional for seniors and juniors, who may elect further work in the department subject to approval; they may also be required to turn out on special occasions by direction of the commandant upon approval of the president.

#### **THEORETICAL.**

Infantry drill regulations; firing regulations for small arms; field service regulations; manual of guard duty; army regulations. This course is progressive and required for commissioned and non-commissioned officers, one hour a week, one semester, or equivalent. Lectures by the Commandant on various military subjects will be delivered monthly before all cadets. Elements of Military Science; additional requirement for sophomores, one hour a week, second semester.

#### **THEORETICAL—ELECTIVE.**

Field Service Regulations and Military Engineering. Junior year, first semester, one hour a week.

Applied Tactics. Junior year, second semester, one hour a week.

Military Law. Senior year, first semester, one hour a week.

International Law. Senior year, second semester, one hour a week.

All students herein referred to constitute the corps of cadets and are organized for the purpose of drill and administration as an infantry battalion, with a band to which qualified cadets are specially assigned.



The appointment and promotion of commissioned and non-commissioned officers are made in accordance with merit by the commandant subject to the approval of the president.

The College is provided by the U. S. government with the equipment necessary to conduct the department. Each cadet must provide himself with the prescribed uniform.

The following is an extract from War Department orders:

"Upon the graduation of every class, the professor of military science and tactics, after consultation with the president of the college \* \* \*, will decide upon and report to the Adjutant General of the Army the names of such students belonging to the class as have shown special aptitude for military service, and will furnish a copy of his report to the Adjutant General of the State for his information."

---

## Department of Commercial Science

---

PROFESSOR CROSIER.

The commercial department occupies commodious quarters on the second floor of the Central Building. These rooms are exceptionally well suited to the work of the department, and supplied with folding desks, typewriters, and offices for carrying on business transactions, such as banking and mercantile work.

The work in this department includes both shorthand and business training subjects which are arranged so that they may be taken as a part of the regular preparatory course by those who desire to obtain a business training together with a broad general knowledge.

The expenses for this work are far below what is usually charged for such instruction elsewhere, the regular tuition being six dollars per semester, the use of a typewriter for each semester being one dollar additional.

For a schedule of the work see the preparatory department. The following subjects are offered:

1. Commercial Geography. Five recitations a week, first semester. This course is designed to acquaint the student with those dominant features of industry which determine the quantity and quality of trade; to trace the various avenues of commerce and show the causes that give them direction and volume, thus enlarging the student's conception of the natural resources and the resultant eco-



conomic movements which are brought specifically to bear upon every day life. Text; Adams' Commercial Geography.

2. Book-keeping. Three laboratory periods a week, first semester. Single and double entry studied as in actual business; our aim being to acquaint the student in an elementary way with various systems of book-keeping, keeping constantly in mind accuracy and exactness, thus preparing him for the actual practice which is offered later in the year. Penmanship is required with this course. Text: Benton's High School Edition.

3. Book-keeping. Three laboratory periods a week, second semester. Each student will carry on regular transactions through six offices with the student body. While all transactions are of the same general nature, the results are different, thus creating in the individual student the habit of self reliance. All work must be of a certain degree of excellency before the next step can be taken. With this course checks, drafts, notes, copying letters, writing deeds, mortgages, leases, insurance, etc., that would naturally attend actual business, are introduced. Text: Ellis' System of Actual Business Training.

4. Shorthand. Five recitations a week, first semester. Consonant stems, vowels, diphthongs, initial and final hooks and circles, word-signs, etc., in logical order; elimination of vocalization through position; the habit of co-ordination emphasized from the beginning; ordinary business letters introduced towards the close of the term. Text: Graham's Amanuensis Phonography.

5. Typewriting. Five one-hour periods a week, first or second semester. Graded exercises on the machine to learn key-board by the touch method; care of the machine; business letters, law forms, manifolding, mimeographing; department correspondence, speed practice, binding, folding and filing of all kinds of type-written matter. One hour each day. Text: Any standard typewriter manual.

6. Shorthand. Five recitations a week, second semester. General dictation from Brown's Business Correspondence, Humphrey's Typewriting Manual. Law forms of all kinds, general literary selections. The aim of this term is to complete the student's preparation for actual work. Texts: Musick's Universal Dictation; Graham's Amanuensis.

7. Typewriting. Five one-hour periods a week, first or second semester. One hour each day. All amanuensis work of this term to be from shorthand notes. The purpose of this is to give the student power to read notes readily and transcribe the same rapidly. It is especially desirable when practical for the student in shorthand to take typewriting at least two years, as the machine work shows really the finished product of the student's effort. One year is required of all students.

8. Elementary Law. Three recitations a week, first semester. This subject is designed to acquaint the student somewhat with

those fundamental principles underlying our specific law, thus enabling him to pursue more intelligently legal analysis. It is required in the freshman year of the Pharmacy Course. Text: Robinson's Elementary Law with Blackstone and Walker's Law used as reference study.

9. Elementary Law. Three recitations a week, second semester. A topical analysis of contracts; negotiable paper; agency; partnership and corporations; guaranty; sale of chattels; right of stoppage in transit; payment; law of tender; liens; interest and usury; contracts of affreightment; bailment; marine fire and life insurance; probate matters and real estate conveyances. In connection with this outline a brief study is made of South Dakota law having reference to these subjects, the student thus acquiring a general knowledge as well as specific application of same. The student is advised to purchase the Civil Code of South Dakota, or, if he does not desire to do this, a typewritten copy of the sections used will be furnished at actual cost. Text: Townsend's Topical Analysis of Commercial Law.

---

## Preparatory Department

---

PROFESSOR FORSEE, MISS YOUNG.

The Preparatory Course is prerequisite to all courses leading to a degree and is the equivalent of the four year high school course for city schools as adopted by the High School Committee.

The work is arranged so that the student can follow one of three groups, called for convenience, groups A, B and C. Certain subjects that are considered necessary to a liberal education are common to the three groups. The remaining work is to be selected by the student from one of the three groups according to the line of study he wishes to pursue.

Group A is suited to those who wish to pursue work in the natural sciences.

Group B is intended for those who desire training in shorthand, typewriting and business methods together with a general education. The commercial department, in which these special subjects are taught, occupies commodious quarters, and is supplied with folding desks, typewriters, and offices for carrying on business transactions, such as banking and mercantile work. The subjects of this group are arranged so that students who have had the necessary training along other lines may complete a course in business practice or shorthand subjects in one year.

Group C includes Latin instead of the natural sciences or business subjects of the other two groups, and is intended for those who expect to follow literary or classical lines.

Since this scheme of study has only recently been adopted, it will not go into effect until the fall of 1911.

The students of this department are under the supervision of an experienced member of the faculty, who superintends their work and strives to secure the forming of correct habits of life on the part of all.

Students will be admitted to this department upon completion of the eighth grade work in the public schools.

The Franklin Literary Society is composed of preparatory students and short course students of equal rank. This work is also under the supervision of the Principal of the department.

The following subjects are offered in this department:

#### ENGLISH.

1. Composition. Five recitations a week, first semester. Choice of words, meaning of words, preferred usage according to best authorities. Text to be announced.

2. Composition. Five recitations a week, second semester; prerequisite, English 1. Kinds of composition; study of description; paragraphing; narration; clearness; letter writing; choice of words; exposition and argument. Text to be announced.

3. Composition and Rhetoric. Five recitations a week, first semester. This work affords the student practice in composition, an introductory knowledge of the principles of rhetoric and an acquaintance with certain masterpieces of English literature. Herrick and Damon's Composition and Rhetoric for Schools is used as a textbook. Of the selected classics some are used for rapid reading, others for careful study in class.

4. Composition and Rhetoric. Five recitations a week, second semester. A continuation of English 3.

5. American Literature and Classics. Five recitations a week, first semester.

6. American Literature and Classics. Five recitations a week, second semester.

7. English Literature and Classics. Five recitations a week, first semester.

8. English Literature and Classics. Five recitations a week, second semester.

#### LIBRARY.

With a view to facilitating the student's use of the library the following courses are given:



1. Library. One recitation a week, first semester. The use of indexes and abbreviations; the card catalog; classification; use of dictionaries and encyclopedias; the leading periodicals; periodical indexes.

2. Library. One recitation a week, second semester. The history and relative value of dictionaries and encyclopedias; special encyclopedias; other reference works; U. S. government publications.

### LATIN.

1. Latin. Five recitations a week, first semester. Primary principles of the language, including inflection and syntax with special attention to etymology, showing the relation of Latin stems to English words. Text: *Bellum Helveticum*.

2. Latin. Five recitations a week, second semester. Continuation of Latin 1. *Bellum Helveticum* completed.

3. Latin. Five recitations a week, first semester. Caesar, Books I, II and III.

4. Latin. Five recitations a week, second semester. Caesar, Book IV; Cicero's Orations against Cataline, I and II.

5. Latin. Four recitations a week, first semester. Cicero, Orations against Cataline, III and IV; Poet Archias.

6. Latin. Four recitations a week, second semester; Latin 5 continued. Virgil, Books I and II, with special attention to scansion, rhetorical figures, and mythological references.

7. Latin. Four recitations a week, first semester. Virgil, Books III, IV and V.

8. Latin. Four recitations a week, second semester; Latin 7 continued. Virgil, Book VI; Livy.

### HISTORY.

1. U. S. History. Five recitations a week, first semester; prerequisite, a knowledge of the history of the United States to the Colonial Period. A study of the conditions during the Colonial Period; Revolutionary War and War of 1812; industrial development of our country; the long struggle with slavery; the indestructibility of the Union; the economic struggle; the growth of the Northwest. Text to be announced.

2. Civics. Five recitations a week, second semester. General principles of government; branches of government; a close study of the constitution; comparison between the principles of the national government and those of our own state; principles of law; contracts in general. Text to be announced.

3. Greek History. Three recitations a week, first semester; History of Greece with brief preliminary survey of oriental history. The history of Greece and Rome is regarded as a study of the evolution of Greek and Roman institutions. Events are considered in their bearing on that evolution. A text-book is used, supplemented by other material. Text: *West's Ancient World*.



4. Roman History. Three recitations a week, second semester. History of Rome with special emphasis upon the institutions of the empire. The work of this course includes the period of transition to the year 800 A. D. Text: West's Ancient World.

5. English History. Three recitations a week, first semester. History of England to 1485. Emphasis upon constitutional points, and upon those institutions from which our own are derived. Text-book, lectures, papers and reports. Text: Cheyney's Short History of England.

6. English History. Three recitations a week, second semester. Continuation of History 5. The Tudors and the Reformation; the Stuarts and Parliament; England under Parliamentary rule; the era of reform; democracy and empire. Text: Cheyney's Short History of England.

### MATHEMATICS.

1. Arithmetic. Five recitations a week, first semester; prerequisite, knowledge of Arithmetic to percentage. All the principles of percentage; involution; evolution; mensuration and the entire metric system. Text; Southworth-Stone's Arithmetic, Part 3.

2. Algebra. Five recitations a week, second semester. Beginning with the fundamental notions. Text: Milne's Academic Algebra.

3. Algebra. Five recitations a week, first semester. Continuation of Mathematics 2.

4. Algebra. Five recitations a week, second semester. Continuation of Mathematics 3. A general review of quadratics, the progressions, ratio and proportion, logarithms and such other important topics as the time will permit of taking up.

5. Plane Geometry. Four recitations a week, first semester; prerequisite, Mathematics 2. Beginning the subject. Text: Sanders' Plane and Solid Geometry.

6. Plane Geometry. Four recitations a week, second semester; prerequisite, Mathematics 3 and 5. Plane Geometry completed. .

### PHYSICS.

1. Elementary Physics. Three recitations and two laboratory periods a week, first semester; prerequisite, Mathematics 2. Properties of matter, mechanics of solids, and mechanics of fluids; nature of light, intensity, velocity and reflection of light; laboratory work showing principal phenomena and proving laws governing them in properties of matter, mechanics of solids and mechanics of fluids; velocity of sound, color and reflection of light. Text: Carhart and Chute's High School Physics; Chute's Practical Physics—Laboratory Manual.

2. Elementary Physics. Three recitations and two laboratory periods a week, second semester; prerequisite, Physics 1. Refraction of light, heat, electricity and magnetism; laboratory work in heat, colorimetry, refraction of light, magnetism, static electricity, detec-

tion of electric current and its direction, induced currents and measurements of electrical resistances. Texts: Carhart and Chute's High School Physics; Chute's Practical Physics—Laboratory Manual.

### **MECHANICAL ENGINEERING.**

1. Carpentry and Wood Turning. Three laboratory periods a week, first semester. Talks on the care and use of different tools. Practice at the bench in making the various joints used in wood construction.

2. Forging. Three laboratory periods a week, second semester. Bending, drawing, up-setting, welding and forging iron; steel manipulation, including cold chisels, punches and lathe and planer tools, tempering and hardening.

3. Mechanical Drawing. Three laboratory periods a week, first and second semesters. Instrumental drawing, geometrical problems and parts of machines. This work is offered during the entire year, and at hours convenient to teachers and students.

### **ZOOLOGY.**

1-2. Elementary Physiology. Two recitation and laboratory periods a week, first and second semesters. This is offered in the second year of the preparatory course and is designed to meet the requirements for High School physiology. It includes an elementary study of the human body, its physiology, hygiene and sanitation. Text: Hough and Sedgwick's "The Human Mechanism."

### **NATURE STUDY.**

1-2. Elementary Biology. Three lectures and two laboratory periods a week, first and second semesters. An elementary course in biology; the first semester will be devoted to the study of animal life, while the second will deal with plant life.

### **PHYSIOGRAPHY.**

1. Five recitations a week, second semester. The relation between the earth and the sun; rivers; weathering of soils, glaciers, their cause and action; land forms, their cause and influence on man; volcanoes, the causes and effect; the atmosphere and its importance; the ocean; life on land and sea; how the physical conditions of the earth affect the life of man. Text: Gilbert and Brigham's Introduction to Physical Geography.

### **ART.**

1. Free Hand Drawing. Three laboratory periods a week, first semester. Elementary Course. Drawing from simple casts in charcoal, theory of perspective; drawing in pencil. This work is arranged to be of direct assistance to students in their several courses in the college.

2. Free Hand Drawing. Three laboratory periods a week, second semester. Charcoal drawing continued; clay modelling from casts and objects; sketching in pencil and pen and ink.

**DOMESTIC ART.**

1. Cooking. Three laboratory periods a week, first semester. Designed for those who desire a knowledge of practical cookery. This course also includes instruction in care of the kitchen; serving and washing of dishes.

2. Sewing. Three laboratory periods a week, second semester. This course aims to give students an understanding of the stitches and methods employed in plain sewing. Each student is required to make a suit of underwear. This course or its equivalent is a necessary prerequisite to any other course in needlework in the department.

The following is the scheme of the preparatory work:

**Note**—The large letters A, B or C placed in front of an elective subject indicates that the subject belongs to the group A, B or C as described above.

**PREPARATORY COURSE.****First Year.****First Semester—**

Composition, a 5.....	English	1
Arithmetic (including Metric System), a 5.....	Mathematics	1
United States History, a 5.....	History	1
Military Tactics, 3.....		
Elective.....		
A Free Hand Drawing, b 3, or.....	Art	2
B Bookkeeping, b 3 or.....	Commercial Science	2
C Elementary Latin, a 5.....	Latin	1

**Second Semester—**

Composition, a 5.....	English	2
Algebra, a 5.....	Mathematics	2
Civics, a 5.....	History	2
Military Tactics, 3.....		
Elective.....		
A Free Hand drawing, b 3, or.....	Art	2
B Bookkeeping, b 3, or.....	Commercial Science	3
C Elementary Latin, a 5.....	Latin	2

**Second Year.****First Semester—**

Composition and Rhetoric, a 5.....	English	3
Algebra, a 5.....	Mathematics	3
Greek History, a 3.....	History	3
Military Tactics, 3.....		
Elective.....		
A { Bookkeeping, b 3, and.....	Commercial Science	2
{ Elementary Physiology, a & b 2.....	Zoology	1
B *Stenography, a 5, or.....	Commercial Science	4
C Caesar, a 5.....	Latin	3



**Second Semester—**

Composition and Rhetoric, a 5.....	English	4
Algebra, a 5.....	Mathematics	4
Roman History, a 3.....	History	4
Military Tactics, 3.....		
Elective.....		
A { Bookkeeping, b 3, and.....	Commercial Science	3
{ Elementary Physiology, a & b 2.....	Zoology	2
B *Stenography, a 5, or.....	Commercial Science	6
C Caesar, a 5.....	Latin	4

**Third Year.****First Semester—**

American Literature and Classics, a 5.....	English	5
Plane Geometry, a 4.....	Mathematics	5
English History, a 3.....	History	5
Library, a 1.....	Library	1
Military Tactics, 3.....		
Elective.....		
A, B Elementary Biology, a 3, b 2, or.....	Entomology	1
C Cicero, a 5.....	Latin	5

**Second Semester—**

American Literature and Classics, a 5.....	English	6
Plane Geometry, a 4.....	Mathematics	6
English History, a 3.....	History	6
Library, a 1.....	Library	2
Military Tactics, 3.....		
Elective.....		
A, B Elementary Biology, a 3, b 2, or.....	Entomology	2
C Cicero, a 5.....	Latin	6

**Fourth Year.****First Semester—**

English Literature and Classics, a 5.....	English	7
Elementary Physics, a 3, b 2.....	Physics	1
Commercial Geography, a 5.....	Commercial Science	1
Military Tactics, 3.....		
Elective.....		
A Carpentry and Wood Turning, b 3, or .....	Mechanical Engineering	1
A Cooking, b 3, or.....	Domestic Art	1
B Elementary Law, a 3, or.....	Commercial Science	8
C Virgil, a 4.....	Latin	7

**Second Semester—**

English Literature and Classics, a 5.....	English	8
Elementary Physics, a 3, b 2.....	Physics	2
Physiography, a 5.....	Physiography	1



---

Military Tactics, 3.....	.....
Elective.....	.....
A Forging Iron and Steel, b 3, or..	Mechanical Engineering 2
A Sewing, b 3, or.....	Domestic Art 2
B Elementary Law, a 3, or.....	Commercial Science 9
C Virgil, a 4.....	Latin 8

\*Students electing stenography must take typewriting one hour each day.

Students electing the work of the commercial science department, (group B), may elect the first two years of Latin instead of elementary biology, commercial geography and physiography in the third and fourth years.

---

## School of Agriculture

---

DR. BRIGHAM, MISS FROMME, MISS KELLY.

The School of Agriculture of South Dakota opened in November 1908. During the five months of the first school year more than one hundred students were registered in the pioneer class. The average age of these students was twenty years.

About one-third of the students of the pioneer class have taken the second year's course and about eighty students were registered in the class entering in November, 1909.

The Annex to the Chemical Building of the State College, erected the past year, became available in January of this year and provides much needed lecture rooms, laboratory, kitchen and sewing room for the School of Agriculture. With the entering of the third class in November 1910 the finding of sufficient rooms for the classes will again become a serious problem.

The School of Agriculture has for its specific purpose the instruction and training of young people for the life and work of the farm and home, for the social life of the rural community and for American citizenship.

The farmers' boys and girls are often needed on the farms and in the homes to help the parents during the busy seasons of the year. They can usually be spared from such work during the winter season, and may well spend this time in study which will prepare them for practical, profitable farming and successful home management.

The aim of the instructors in the School of Agriculture is to search out, with the students, the underlying principles of the objects and operations of the farm and household and to teach their application in successful practice.

While the subjects of study consist primarily of those which relate to farming and household economy, they include also such as are essential to a regular high school course. English and mathematics receive due attention. History and civics help to prepare the student for citizenship. Drawing and music are not neglected. Chemistry, physics and biology (including botany, bacteriology, physiology and entomology) will be studied, especially in their relations to the farm and the home. The instruction is largely technical. The technical topics include studies in soil, plants and crops, domestic animals, food, feeds and feeding, cooking, sewing, laundering, farm and home management, records and accounts, carpentry and blacksmithing. Text-books are used when these aids best answer the purpose. Lectures are given in the subjects which can be most efficiently taught in this way. Free use is made of object lessons. Demonstrations are given in the class rooms, laboratories, kitchen and sewing rooms, barns, greenhouses, gardens, orchards and fields. Laboratory practice is given as far as the facilities permit.

The School of Agriculture welcomes earnest and worthy young men and women from all parts of the state who have passed the eighth grade in the public schools and are willing to work in such a course of mental and manual training as will prepare them for life's labors, on the farms and in the homes of South Dakota.

#### THE SCHOOL YEAR.

The season of schooling continues during the colder months of the year. The next term begins November 1, 1910 and continues until Christmas time; the second term opens January 2, and continues until March 30, 1911.

The students of the School of Agriculture, after five months of study and training, will return to their homes for seven months and apply in practice the principles and methods which they have studied.

### COURSES OF STUDY.

Following are the schedules of the courses of study. The academic studies are practically the same for men and women. The courses are differentiated only in such points as are related to their specific spheres in life's work:

#### THREE YEARS' COURSE FOR MEN.

Note—The small letters and numbers after the names of subjects indicate the character of the work and the number of times a week, "a," meaning class work, "b," laboratory work.

##### First Year.

###### First Term—

English.....	a	4
Mathematics.....	a	4
Agronomy.....	a	1
Chemistry (Elementary).....	b	2
Biology (Agricultural Botany).....	b	2
Mechanical Drawing.....	b	2
Poultry Culture.....	a 1, b	1
Farm Crops.....	b	2
Live Stock Judging.....	a	2
Dairy Husbandry.....	a 2, b	1
Agricultural Bacteriology.....	a 1, b	1
Blacksmithing.....	b	3
Music (vocal).....		5
Military Drill.....		3

###### Second Term—

English.....	a	4
Mathematics.....	a	4
Chemistry (Inorganic).....	b	2
Biology (Agricultural Botany).....	b	2
Mechanical Drawing and Building Plans.....	b	2
Poultry Culture.....	a 1, b	1
Farm Crops.....	a 1, b	1
Live Stock Judging.....	a	2
Dairy Husbandry.....	a 2, b	1
Horticulture (Gardening).....	b	1
Agricultural Bacteriology.....	a 1, b	1
Carpentry.....	b	2
Military Drill.....		3

##### Second Year.

###### First Term—

English.....	a	4
Music.....		5
Algebra.....	a	4

Farm Accounts and Records.....	a 1
Chemistry (Organic).....	a 3
Biology (Animal Life).....	a 3
Agricultural Physics.....	b 2
Drawing (Free Hand).....	b 2
Soil Formation and Management.....	a 1, b 1
Live Stock Judging.....	a 3, b 1
Horticulture (Fruit Growing).....	a 1, b 1
Farm Machinery.....	b 2
Music.....	5
Military Drill.....	3

**Second Term—**

English.....	a 4
Algebra.....	a 4
Farm Accounts and Records.....	a 1
Biology (Animal Life).....	a 3
Drawing (Free Hand).....	b 2
Agricultural Physics.....	b 2
Soil Formation and Management.....	a 1, b 1
Breeds of Live Stock.....	a 3
Live Stock Breeding.....	a 2
Horticulture (Fruit Growing).....	a 1, b 1
Farm Machinery.....	b 2
Music.....	5
Military Drill.....	3

**Third Year.****First Term—**

English.....	a 4
Geometry.....	a 4
Biology (Human Life).....	a 2
Drawing.....	b 2
History and Civics.....	a 4
Land Management.....	a 2
Live Stock Feeding.....	a 4
Dressing and Curing Meats.....	b 1
Forestry.....	a 1
Veterinary Science (Prevention of Animal Diseases).....	a 2
Farm Manufacturing.....	b 2
Music.....	5
Military Drill.....	3
Theme (Selection of Subject and Synopsis).....	1

**Second Term—**

English.....	a 4
Geometry.....	a 4
Biology (Human Life).....	a 2
Drawing.....	b 2



Land Management.....	a	2
Live Stock Feeding.....	a	4
Advanced Live Stock Judging.....	b	2
Agricultural Organization and Co-operation.....	a	1
Forestry.....	a	1
Veterinary Science (Prevention of Animal Diseases).....	a	2
Farm Manufacturing.....	a 1, b	1
Agricultural Storage, Transportation and Marketing.....	a	1
Music.....		5
Military Drill.....		3
Theme (To be presented before March 1).....		3

### THREE YEARS' COURSE FOR WOMEN.

#### First Year.

##### First Term—

English.....	a	4
Mathematics.....	a	4
Agronomy.....	a	1
Chemistry (Elementary).....	b	2
Biology (Agricultural Botany).....	b	2
Mechanical Drawing.....	b	2
Poultry Culture.....	a 1, b	1
Dairying.....	b	1
Bacteriology.....	a 1, b	1
Cooking (Elementary) (3 hour b periods).....	a 1, b	2
Sewing (Elementary) (3 hour periods).....	b	2
Music (vocal).....		5
Physical Culture.....		2

##### Second Term—

English.....	a	4
Mathematics.....	a	4
Agronomy.....	a	1
Chemistry (Inorganic).....	b	2
Biology (Agricultural Botany).....	b	2
Mechanical Drawing and Home Architecture.....	b	2
Poultry Culture.....	a 1, b	1
Horticulture (Floriculture and Home Gardening).....	b	1
Bacteriology.....	a 1, b	1
Cooking and Serving (3 hour periods).....	b	2
Sewing (3 hour periods).....	b	2
Music (vocal).....		5
Physical Culture.....		2

#### Second Year.

##### First Term—

English.....	a	4
Algebra.....	a	4

Household Accounts and Records.....	a 1
Chemistry (Organic).....	a 3
Biology (Animal Life).....	b 2
Physics.....	b 2
Drawing (Free Hand).....	b 2
Household Management.....	a 2
Household Science.....	a 1, b 1
Sanitation.....	a 1
Textiles and Sewing.....	a 1, b 2
Music.....	5
Physical Culture.....	2

**Second Term—**

English.....	a 4
Algebra.....	a 4
Biology (Human Life).....	a 1
Drawing (Free Hand and Designing).....	b 2
Household Accounts and Records.....	a 1
Physics.....	b 2
Household Chemistry.....	b 1
Laundrying .....	b 1
Household Science, (Marketing, Planning Menues, Serving, Table Decoration).....	a 1, b1
Sanitation.....	a 1
Dietetics.....	b 1
Sewing (Making Woolen Dresses) (3 hour periods).....	b 1
Tailoring.....	b 2
Clay Modeling, Wood Carving.....	b 1
Music.....	5
Physical Culture.....	2

**Third Year.****First Term—**

English.....	a 4
Geometry.....	a 4
Biology (Human Life).....	a 2
Drawing.....	b 2
History and Civics.....	a 4
Household Sanitation and Plumbing.....	a 2
Household Science.....	a 1, b 1
Dressing and Curing Meats.....	b 1
Home Decoration.....	b 1
Millinery.....	b 1
Clay Modeling, Wood Carving.....	b 1
Physical Culture.....	2
Theme (Selection and Synopsis).....	1

Second Term—

English.....	a	4
Geometry.....	a	4
Biology (Human Life).....	a	2
Drawing.....	b	2
Agricultural and Domestic Organization and Co-operation....	a	1
Invalid Cookery (3 hour period).....	b	2
Home Nursing and Emergencies.....	b	2
Care and Feeding of Children.....	a	1
Designing and Making Graduation Dresses.....	b	2
Leather Tooling.....	b	1
Music.....		5
Physical Culture.....		2
Theme (To be presented before March 1).....		1

## **SHORT INDUSTRIAL COURSES**

Special work is offered in the various industrial departments for the benefit of those who can not avail themselves of the opportunities offered in the longer courses. These short courses are becoming a very attractive and profitable feature in the lives of many who can get away from their homes only at the time of the year when the work is offered, and persons of all ages, young and old, are found working side by side in these classes, to improve the conditions of their lives in the home and on the farm. A special effort is put forth to make the work interesting and specialists from other institutions are often engaged to assist in the instruction.

Since much of this work is adapted to the needs of the persons enrolled for it, the courses cannot be very fully described here. For a more detailed description of any particular work, address inquiries to the department concerned or to the President of the College.

The different courses are mentioned below:

### **The Two Weeks Course in Agriculture**

**January 3 to January 14**

This course will consist of lectures on judging live stock, stock breeding, stock feeding, corn judging, grading and cleaning grain, poultry management and kindred subjects.

### **The Three Months Creamery Course**

**February 7 to April 29**

This course is especially designed for young men wishing to fit themselves for various positions connected with the creamery industry such as helpers, buttermakers, managers, inspectors, etc.

Prospective students are urged to get at least six months of practical experience in some creamery before attending college, as by this means it is found that much greater benefit is derived from the work taught at the school.

The more general application of scientific principles to the manufacturing industries as well as the increasing competition on all sides demand a more thorough training in scientific and business methods than heretofore. This is no less true with



regard to the creamery industry, and while the practical work of the school is by no means neglected special pains are taken to teach the underlying principles and the "reason why" for many of our daily operations.

The increasing interest in dairying in South Dakota and the consequent multiplication of creameries are creating a demand for men well trained along dairy lines, and applications for such are constantly being received at salaries varying from \$50 to \$125 per month. Worthy students may count on the co-operation of the dairy department in helping them to secure positions at the close of their college work.

The following work is offered:

Factory buttermaking and creamery management.

Testing milk and its products.

Dairy bacteriology.

Dairy arithmetic and bookkeeping.

Breeding, feeding and management of dairy cattle.

Agronomy.

Veterinary Medicine.

Creamery Mechanics.

A certificate of standing will be issued to all students passing satisfactory examinations on the above subjects.

A diploma will also be issued to students holding certificates of standing after satisfactorily demonstrating their ability to successfully operate a creamery for one year.

### **Short Course in Steam Engineering**

January 3 to June 9

Modern agricultural methods have introduced in such a marked degree the steam engine as a substitute for animal power that the consequent growing demand for steam engineers has led the College to arrange a two-term course of study for the special training of steam (especially traction) engineers. Extreme care has been taken only to offer such work as shall prove valuable to the man running the traction engine, or other machinery. A relatively large amount of shop work, engine repairing and engine running is introduced, with a proper proportion of recitations in closely allied subjects. Upon the satisfactory completion of this work the student is given a certificate which is virtually the same as a license in the state to run an engine.

Students who desire to take this course are expected to pass satisfactory examinations in arithmetic as far as the preparatory class carries that subject in the fall; also to read intelligently and show such general elementary training as shall indicate that they are able to understand the subjects embraced in the engineering course.

The winter term begins January 3, and the spring term April 4. The work is as follows:

#### WINTER TERM.

Arithmetic.....	a 5
Physics of Steam.....	a 5
Civil Government.....	a 5
Forging.....	b 3
Mechanical Drawing.....	b 2

#### SPRING TERM.

Algebra.....	a 5
Steam Engine Lectures.....	a 5
Elementary Physics.....	a 5
Forging.....	b 2
Mechanical Drawing.....	b 3
Engine Practice.....	b 5

### Student Organizations

#### INDUSTRIAL COLLEGIAN.

Howard Biggar.....	Editor-in-Chief
Percy Huntimer.....	Business Manager

#### ATHLETIC ASSOCIATION.

Max Meharg.....	President
Elmer Sexauer.....	Secretary
Charles Johnson.....	Treasurer
Percy Huntimer.....	President State Inter-Collegiate Athletic Assn.

#### BOARD OF CONTROL OF ORATORY AND DEBATING.

Elmer Sexauer.....	President
T. B. Kelly.....	Secretary

#### BAND.

Francis J. Haynes.....	Leader
------------------------	--------

#### YOUNG MEN'S CHRISTIAN ASSOCIATION.

Clifford Johnson.....	President
Henry Erdmann.....	Secretary

#### YOUNG WOMEN'S CHRISTIAN ASSOCIATION. ....

Neva Knutson.....	President
Grace Revell.....	Secretary

Amy Ladd.....	President
Lewis Vercoe.....	Secretary

Joseph Morrison.....	President
Bess Fridley.....	Secretary

Alfred Guse.....	President
Rena Nettum.....	Secretary

Walter Fickle.....	President
Neva Knutson.....	Secretary

Charles Johnson.....	President
Floyd F. Barber.....	Secretary

**Francis J. Haynes.....Conductor**

**Francis J. Haynes.....Conductor**

Henry Erdmann.....	President
Erwin Oakland.....	Secretary

### FIELD AND STAFF.

<b>Majors</b> .....	} Jesse Ray Fridley Fred C. Matheny
<b>Adjutant</b> .....	
<b>Quartermaster</b> .....	Paul Harpel Granger
	Henry Erdmann

Sergeant Major.....	Lewis Vercoe
Color Sergeants.....	{ Henry Sparks
	{ Fred Dachtler
Chief Trumpeter.....	Arthur Mathews

Captain.....	Clifford D. Johnson
1st Lieutenant.....	Vance Crane
2nd Lieutenant.....	Roy Soule
1st Sergeant.....	William Sauder
Q. M. Sergeant.....	Albert D. Shepard
Sergeant.....	Edward F. Carey
Sergeant.....	C. V. Pratt
Sergeant.....	Glen Cole
Sergeant .....	John Reeve

---

Corporal.....	John C. Meyer
Corporal.....	Frank B. Crosier
Corporal .....	Ross Jensen
Corporal.....	Olaf Keland
Corporal .....	Alex Culhane
Musician.....	William Joseph

**COMPANY "B"**

Captain.....	John H. Balmat
1st Lieutenant.....	Oscar Gough
2nd Lieutenant.....	Carl Engstrom
1st Sergeant.....	Guy Marchant
Q. M. Sergeant.....	Lynn Osborn
Sergeant.....	Clyde Sawyer
Sergeant.....	Scott Soule
Sergeant.....	James Treacy
Sergeant .....	Ralph Kremer
Corporal.....	Lloyd Hyde
Corporal .....	A. R. Peck
Corporal.....	Samuel Sloan
Corporal.....	Elmer Anderson
Musician.....	Harry W. Bacon
Musician.....	Everett W. Dum



# COLLEGE ALUMNI

## ALUMNI ASSOCIATION.

M. E. Culhane, '01.....	President
B. H. Alton, '08.....	First Vice President
F. E. Boyden, '97.....	Second Vice President
C. J. Coughlin, '09.....	Third Vice President
H. B. Mathews, '92.....	Secretary and Treasurer

GRADUATES

### Class of 1886.

#### BACHELOR OF SCIENCE.

Sayler, Marcus A., Prof. of Mining & Irrigation Eng., New Mexico  
School of Mines, Socorro.

### Class of 1888.

#### BACHELOR OF SCIENCE.

Aldrich, John M.....Prof. Biology, U. of Idaho, Moscow, Idaho  
Hewes, Lulah, (Wellman).....Mayville, N. Y.  
Lawrence, Philip A.....Attorney, Fargo, N. D.

### Class of 1889.

#### BACHELOR OF SCIENCE.

Aldrich, Ellen (Roe).....Died Dec. 8th, 1897, at Helena, Mont.  
Arnold, Katie (Boswell).....Oacoma  
Brooke, Grace (Lawshe).....Preceptress, Valley City, N. D.  
Crane, May (Cranston).....Kettle Falls, Wash.  
Cross, Alvah G.....  
Cunningham, Sarah (Haber).....Spokane, Wash.  
Eno, Durell G.....Farmer, Platte  
Grady, Francis A.....Attorney, Red Lake Falls, Minn.  
Korstad, Hans.....Farmer, Brookings  
Larson, Lars K.....Bank Cashier, Dell Rapids  
McKenney, Duston W., Principal C. M. Schwab Manual Training  
School, Homestead, Pa.  
McLouth, Lewis C.....Gen. Mgr. Miniature Sales Co., Detroit, Mich.  
Mork, Albert A.....Farmer, Des Lacs, N. D.  
Orcutt, Carrie (Ross).....Northfield, Minn.  
Rogers, Edmund.....Machinist, Milwaukee, Wis.  
Scott, Anna (Wardall).....Osteopath, Seattle, Wash.  
Wesche, Abbie E. (Ross).....Webb, Ia.

### Class of 1890.

#### BACHELOR OF SCIENCE.

Allen, William C.....Died in Chicago  
Day, John M.....Mellette  
Egeburg, Hildus.....Farmer, Brookings  
Haasarud, Ole H.....Farmer, Bratsburg, Minn.

- Harkins, Lilla A., Prof. of Dom. Science, Montana Agricultural College, Bozeman.  
 Hopkins, Cyril G., Prof. of Agronomy, Chemist, and Vice Director of U. S. Experiment Station, U. of Illinois, Champaign.  
 Irish, Maggie (Duffey).....St. Louis, Mo.  
 Jenkins, John C.....Attorney, Portland, Oregon  
 Kenyon, Arthur H.....Lawyer, Spokane, Wash.  
 Pyne, Estel W.....Piano Dealer, Los Angeles, Cal.  
 Roe, Guy W.....Sup't. Union Fibre Co., Winona, Minn.  
 Stoner, Minnie A., Prof. of Domestic Science, University of Wyoming, Laramie.  
 Wardall, Norman M.....Dep't. County Auditor, Seattle, Wash.

**Class of 1891.****MASTER OF SCIENCE.**

- Aldrich, John M.....Prof. Entom., U. of Idaho, Moscow, Idaho

**Class of 1891.****BACHELOR OF SCIENCE.**

- Aldrich, Irwin D....Editor and Sec. Regents of Education, Big Stone  
 Bacon, Nora (Updyke).....Pueblo, Col.  
 Bell, William D.....Editor, St. James, Minn.  
 Bentley, Wm. S.....Physician, Hot Springs  
 Crane, Austin B.....Civil Eng., Kettle Falls, Wash.  
 Davis, Homer.....Physician, Genoa, Neb.  
 Dillon, Willis C.....Attorney, Omaha, Neb.  
 Dibble, Hettie (Doughty).....Clark  
 Fourn, Fanny (Shannon).....Fairfield, Ia.  
 Haberlein, Alice (Robinson).....Mexico City, Mex.  
 Hann, Jay B.....Photographer, Bellingham, Wash.  
 Houston, Grant.....Physician, Joliet, Ill.  
 Irish, Henry C.....Supt. Botanical Gardens, St. Louis, Mo.  
 Lewis, Perry.....Inventor, Mankato, Minn.  
 Millett, Mary (Frick).....Rochester, Minn.  
 Solberg, Halvor C.....Prof. Steam and Mechanical Eng., S. D. S. C.  
 Spooner, Jennie (Chamberlain).....Physician, Shepard, Mich.  
 Valleau, Vinal B.....Real Estate, Aberdeen  
 West, Hugh H.....Physician, Elgin, Ill.  
 Wolgemuth, Lee E.....Real Estate, Hamilton, Mont.

**Class of 1892.****BACHELOR OF SCIENCE.**

- Aiken, Margaret (Madden).....Brookings  
 Austin, Steven E.....Mechanical Engineer, Chicago  
 Clark, Effie (Snell).....Memphis, Nebr.  
 Davis, Samuel H.....Farmer, Beaverton, Ore.  
 Griffiths, David, Ass't. Agrostologist, Agr. Dep't., Tacoma Park, Wash.  
 Hamlin, John R., Jr.....Los Angeles, Cal.

Harding, Albert S. . . . . Prof. of History & Political Science, S. D. S. C.  
 Hatfield, Ira H. . . . . Attorney, Lincoln, Neb.  
 Keeney, Emma A. . . . . Physician, Silver Lake, Ore.  
 Mathews, Eva (Plocker) . . . . . Brookings  
 Mathews, Hubert B. . . . . Prof. of Physics, S. D. S. C.  
 McAndrew, James E. . . . . Lawyer, Spokane, Wash.  
 \*McLouth, Ida B. . . . . Died, Aug. 27, 1899, at Short Beach, Conn.  
 Schlosser, Thomas F. . . . . Clergyman, Garfield, Wash.  
 Torrence, Nettie (Sloan) . . . . . Redlands, Cal.  
 Whitten, John C. . . . . Prof. of Hort., U. of Missouri, Columbia  
 Winegar, Albert J., Ass't. Sup't. Buda Iron and Steel Works, Harvey,  
 Ill.

### Class of 1893.

#### MASTER OF SCIENCE.

Griffiths, David, Ass't Agrostologist, Dep't. of Agriculture, Washington, D. C.

#### BACHELOR OF SCIENCE.

Bates, Edmund T. . . . . Farmer, Onslow, Ia.  
 Beck, Milton. . . . . Chief Engineer, Alamo Mf'g. Co., Hillsdale, Mich.  
 Edgerton, Wm. M. . . . . Physician, Faulkton  
 McLouth, Benjamin F. . . . . Ins. Agent, Los Angeles, Cal.  
 Robertson, Ada N. . . . . Teacher, East Helena, Mont.  
 Robertson, Clarence H., Science Teacher and Y. M. C. A. Sec. for  
 China, New York, N. Y.  
 Schoppe, W. J. A. . . . . Farmer, Groton, S. D.

### Class of 1894.

#### MASTER OF SCIENCE.

Mathews, Eva (Plocker) . . . . . Brookings  
 Wolgemuth, Lee E. . . . . Real Estate, Hamilton, Mont.

#### BACHELOR OF SCIENCE.

Brown, Cyrus O. . . . . Attorney, Burwell, Neb.  
 Brown, James A. . . . . Attorney, Lincoln, Neb.  
 Hopkins, Mrs. C. G. . . . . Champaign, Ill.  
 Knox, Elinor (Williams) . . . . . Higley, Arizona  
 Luke, Fred K. . . . . Farmer, Kalispell, Mont.  
 Lunde, Hattie (Dibble) . . . . . Castlewood  
 Spooner, Fannie (Parker) . . . . . Brookings  
 Sproul, Alex H., Head of Com'l Dep't., Shortridge High School,  
 Indianapolis, Ind.  
 Tanzy, Marvin F. . . . . Died Feb. 8, 1900, at Canton, S. D.  
 Waters, Geo. D. . . . . Accountant, Chandler, Okl.  
 Young, Gilbert A., Ass't. Prof. of Mech. Eng., Purdue Univ., Lafayette, Ind.

**Class of 1895.****MASTER OF SCIENCE.**

McKenney, Dustin W. Principal C. M. Schwab Manual Training School, Homestead, Pa.

Schoppe, W. J. A.....Farmer, Groton  
 Sproul, Alex H., Head of Com'l. Dep't., Shortridge High School, Indianapolis, Ind.

**BACHELOR OF SCIENCE.**

Allison, Wm. F., Prof. Civil Eng., Colorado School of Mines, Golden, Col.

Brown, Sara.....Teacher, Sherman City, Ia.  
 Cornell, Harry M.....Real Estate, Lethbridge, Canada  
 Merrick, Mable (Mayland).....Troy, Kan.  
 Moore, Anna (Parker).....Brookings  
 Robertson, Edith (Salisbury).....New York, N. Y.  
 Sevy, Isaac B.....Teacher, Milton, Oregon  
 Sproul, Wm. T., Sec. & Treas., Ingersoll Milling Machine Co., Rockford, Ill.

Thornber, John J.....Prof. of Botany, U. of Arizona, Tucson  
 Wilcox, Ernest N.....Farmer, Thawville, Ill.

**PHARMACY GRADUATES.**

Briggs, Elmer E.....Farmer, Balmoral, Wis.  
 Knox, Wm. H.....Farmer, Higley, Arizona  
 Lentz, Elmer A.....Dentist, Brookings  
 Murphy, Wm.....Died July 5, 1896, at Brookings  
 Whitehead, B. T.....Prof. Pharmacy, S. D. S. C.

**Class of 1896.****MASTER OF SCIENCE.**

Brown, James A.....Attorney, Lincoln, Neb.  
 Clark, Effie (Snell).....Memphis, Neb.  
 Luke, Fred K.....Farmer, Kalispell, Mont.  
 Robertson, Ada N.....Teacher, East Helena, Mont.  
 Wilcox, Ernest N.....Farmer, Thawville, Ill.

**BACHELOR OF SCIENCE.**

Atkinson, Jesse C.....Civil Engineer, Park Ridge, Ill.  
 Brown, Ida (Dibble).....Lincoln, Neb.  
 Carter, Louis W.....Farmer, Highmore  
 Downing, Jennie C.....Mgr. Telephone Co., Rathdrum, Idaho  
 Grattan, Paul H.....Hardware Merchant, Jackson, Minn.  
 Hegeman, Harry A., First Lieutenant 19th Infantry, U. S. A., Ft. MacKenzie, Wyo.

Holm, Andrew B.....Photographer, Brookings  
 Hoy, Nora (Mathews).....Brookings  
 Hoy, Howard H.....Ass't. in Phys. and El. Eng., S. D. S. C.  
 Korstad, Mary.....Missionary, Brookings



---

Lusk, Willard C.....	Editor, Yankton
Sasse, Ernest G.....	Physician, Bridger, Mont.
Smith, Alta (Mathews).....	Las Vegas, Nevada
Williamson, Albert.....	Editor, Kennebec

**PHARMACY GRADUATES.**

Cotter, J. C.....	Farmer, Dell Rapids
Grove, Eugene.....	Physician, Badger, S. D.
Moore, Thomas.....	Druggist, Waterloo, Ia.
Palmer, Horton.....	Druggist, White
Sherwin, Frank.....	Merchant, McMinville, Ore.

**Class of 1897.****MASTER OF SCIENCE.**

Davis, Homer.....	Physician, Genoa, Neb.
-------------------	------------------------

**BACHELOR OF SCIENCE.**

Ainsworth, Cephas B.....	Bank Cashier, Frederick
Atkinson, Geo.....	Farmer, Aldred, Saskatchewan, Canada
Atkinson, Walter.....	Civil Engineer, Peotone, Ill.
Boyden, Frank E.....	Physician and Surgeon, Brookings
Bullen, Grace (Young).....	Portland, Ore.
Clevenger, John W.....	Dentist, Chamberlain
Crowley, Cassie (Madden).....	Dickinson, N. D.
Harding, Neva (Whaley).....	Brookings
Hazel, Wm. A.....	Lawyer, Aberdeen
Husted, Harley H.....	Died Jan. 14th, 1907, at Lincoln, Neb.
Jolley, Wm. G.....	Principal of Schools, Castlewood
Olson Eva.....	Teacher, Hamilton, Mont.
Parsons, Thomas S.....	Prof. of Agro. U. of Wyo., Laramie, Wyo.
Remsburg, Alice (Wilcox).....	Thawville, Ill.
Roe, Robert.....	Stockman, Highmore
Saylor, Christie (Hargis).....	Elmo, Mo.
Sevy, Orpha (West).....	Teacher, Milton, Oregon
Shuster, John W....	Ass't. Prof. Elec. Eng., U. of Wisconsin, Madison
Thorner, Walter S.....	Prof. Hort., State College, Pullman, Wash.
Walters, Wm. H.....	Grain Buyer, Bruce
Whitehead, Bower T.....	Prof. of Pharmacy, S. D. S. C.
Work, Lloyd E.....	Bond Salesman, Chicago, Ill.

**Class of 1898.****MASTER OF SCIENCE.**

Chilcott, E. C., Agronomist in charge of Dry Land Agriculture, Fairfax, Virginia.
Harkins, Lilla A., Prof. Domestic Science, Montana Agr. College, Bozeman, Mont.
Parsons, Thomas S.....Prof. of Agro., U. of Wyo., Laramie, Wyo.

**BACHELOR OF SCIENCE.**

Adams, Edith (Riemann).....	Oak Park, Ill.
Ainsworth, Howard.....	Street Car Con., San Francisco, Cal.

---

Allison, Mabel (Hegeman).....	Golden, Col.
Beck, Louis.....	Norwood, Ohio
Bolles, Myrick N.....	Mining Engineer, Monterey, Mexico
Boyden, Maude (Hegeman).....	Brookings
Crane, Elsie (Curtiss).....	Pullman, Wash.
Crane, Margaret (Davidson).....	Spokane, Wash.
Fjerestad, Hans C.....	Grocer, Sioux Falls
Harding, Charles J.....	Teacher, Brookings
Hazel, Flora (Ainsworth).....	Aberdeen
Hodgeson, Herbert H.....	U. S. Geol. Survey, Wash., D. C.
Knox, Wm. H.....	Farmer, Higley, Arizona
Lawrence, Claude W., Inst'r. in Agronomy and Cerealist of the Experiment Station, State College, Pullman, Wash.	
Lawrence, Clay.....	Lawyer, Seattle, Wash.
Paddock, Jay M.....	Ins. Agent, Lake Preston
Thornber, Wm. T.....	Farmer, Dell Rapids
Towne, Addie (Loveland).....	Minneapolis, Minn.
Towne, Judson R.....	Teacher, Minneapolis, Minn.
White, Alice (Barton).....	Santa Ana, Cal.

#### PHARMACY GRADUATES.

Beebe, Jay L.....	Physician, Anaheim, Cal.
Clevenger, J. W.....	Dentist, Chamberlain
Holsey, Joseph.....	Druggist, Veblen
Lee, Berton.....	Druggist, Mankato, Minn.

#### Class of 1899.

#### MASTER OF SCIENCE.

Mathews, Hubert B.....	Prof. of Phys., S. D. S. C.
Lunde, Hattie (Dibble).....	Castlewood
Thornber, Walter S., Prof. of Hort., Washington Ag'l College, Pullman	
Whitten, John C..	Professor of Horticulture, U. of Missouri, Columbia

#### BACHELOR OF SCIENCE.

Findeis, Phillip.....	Lumber Merchant, Miranda
Fystrom, Edith (Walters).....	Geneseo, N. D.
Lawrence, Mary M., Inst. in Dom. Sc., State Normal, Bellingham, Wash.	
Lawrence, Wm. H., Pathologist of State Ex. Sta. and Supt. Western Ex. Sta., Puyallup, Wash.	
Mason, Nellie (Mason).....	Albia, Ia.
Nachtigal, Isaac.....	Farmer, South Shore
Nelson, Ina (Colegrove).....	Cleveland, Ohio
Sherwin, Howard H.....	Civil Engineer, Yonkers, N. Y.
West, George.....	Physician, Armstrong, Ia.

#### PHARMACY GRADUATES.

Carr, George.....	Druggist, Bison
Crowley, D. C.....	Druggist, Dickinson, N. D.

---

Hepner, Frank.....	Ass't Chemist U. of Wyoming, Laramie
Kendall, Clint D.....	Druggist, Brookings
Lindsey, Charles.....	Farmer, Winfred
Oulton, Frank.....	Real Estate, Faulkton
Shriver, E. M.....	Druggist, Elkton
Taylor, C. DeWitt.....	Drug Clerk, Denver, Col.

**Class of 1900.****BACHELOR OF SCIENCE.**

Allen, Hart M.....	Druggist, King City, Cal.
Anderson, Clark W.....	Died March 6th, 1902, at Brookings
Beebe, Jay L.....	Physician, Anaheim, Cal.
Carlson, Esther.....	Teacher, St. Paul, Minn.
Davies, Mary.....	
DeLa, John W.....	Editor, Balfour, N. D.
Doughty, Matthew W.....	Civil Engineer, Scranton, Pa.
Grove, Frank W.....	Dentist, Delta, Col.
Harza, Carl.....	Electrician, Detroit, Mich.
Hodgeson, Gustava (Olson).....	Washington, D. C.
Howard, Ella (Carlson).....	Lake Preston
Kendall, Clinton D.....	Druggist, Brookings
Lawrence, Jessie.....	Teacher, Sequim, Wash.
Mathews, Alice M.....	Teacher, Great Falls, Mont.
Mathews, Roscoe A., Time Keeper for Boston & Montana Smelter, Great Falls, Mont.	
Morrison, Freda C.....	Vermillion
Olson, Callie (Williams).....	Brookings
Sherwin, Sara (Davies).....	Yonkers, N. Y.

**PHARMACY GRADUATES.**

Bentley, Wm. S.....	Physician, Hot Springs
Brosseau, Jesse E.....	Physician, Frankfort
Baldwin, Corwin B.....	Druggist, Rapid City
Connell, John C.....	Druggist, Luverne
Else, Earl.....	Physician, Pullman, Wash.
Eckert, Henry.....	Died at Menno, S. D.
George, William.....	Physician, Evarts
Hart, Bertrand.....	Physician, Blunt
Jones, Robert.....	Druggist, Madison
West, Hugh H.....	Physician, Elgin, Ill.

**Class of 1901.****MASTER OF SCIENCE.**

Knox, Wm. H.....	Farmer, Higley, Arizona
Whitehead, Bower T.....	Professor of Pharmacy, S. D. S. C.

**BACHELOR OF SCIENCE.**

Bagley, Susie.....	Teacher, Brookings
Bolles, Laura Jane.....	Teacher, Sisseton
Brosseau, Jesse E.....	Physician, Frankfort



---

Boyd, Mary.....	Teacher, Brookings
Culhane, Michael E.....	Lawyer, Brookings
Culhane, Lillian (Langdon).....	Brookings
Davies, Autumn.....	Inst. in Hist., H. S., Omaha, Neb.
Dodge, Fred E.....	Hotel Keeper, Redfield
Else, Earl.....	Physician, Pullman, Wash.
Enos, Winifred.....	Teacher, Brookings
Erickson, Martin L.....	Forestry Service, Medford, Ore.
Harza, LeRoy F.....	Civil Eng., Madison, Wis.
Kendall, Leonard J.....	Telegraph Operator, Brookings
Kennedy, C. LeRoy.....	Fruit Raiser, Mountain View, Cal.
Kennedy, Myra (Fishback).....	Brooklyn, N. Y.
Lee, Rhoda (Johnson).....	Died Oct. 18, 1909, Denver, Col.
McElmurry, Loretta.....	Teacher, Brookings
Mork, Theodore.....	Farmer, Des Lacs, N. D.
Phillips, Florence.....	Teacher, Arlington
Phillips, C. Louise.....	Assistant Librarian, S. D. S. C.
Roskie, Lina (Evans).....	Brookings
Hatton, John Henry.....	Forestry Service, San Francisco, Cal.
Young, Maggie (Cranston).....	Died June, 1907, Oakes, N. D.

#### PHARMACY GRADUATES.

Cornell, Edward.....	Drug Clerk, Huron
Tidball, Clyde.....	Druggist, Brookings

#### Class of 1902.

#### BACHELOR OF SCIENCE.

Cuckow, Edith (Thorner).....	Elkton
Fleming, Michael.....	With M. A. Hanna Coal Co., Duluth, Minn.
George, William A.....	Physician, Evarts
Hart, Bertrand M.....	Physician, Blunt
Hepner, Frank E., Ass t Station Chemist, Univ. of Wyoming, Laramie	
Johnson, Clara (Johnson).....	Brookings
Johnson, Edward.....	Died, Tacoma, Wash.
Kephart, George.....	Lawyer, Sioux City, Ia.
Lee, Berton E.....	Mankato, Minn.
Ramsey, Henry J.....	Bureau of Plant Industry, Washington, D. C.
Roskie, Geo.....	Abstractor, Brookings
Trooien, Ole N.....	Contractor in Concrete Work, Detroit, Mich.
Winegar, Laura.....	Bookkeeper, Brookings

#### PHARMACY GRADUATES.

Alllison, Wm. F., Prof of Civil Eng., Colorado School of Mines, Golden, Col.	
Boyden, Frank E.....	Physician and Surgeon, Brookings
Christianson, Bennett C.....	Druggist, Volga
Gassman, Anna (Schroeder).....	Howard
Hayter, McPherson.....	Druggist, Artesian



---

Jarrett, Arthur A.....	Druggist, Colman
Jarvis, S. Hall.....	Druggist, Faulkton
Leighty, James A.....	Druggist, Winfred
Morton, Frederic M.....	Druggist, Sisseton
Pickles, Chester E.....	Farmer, Clark
Schnaidt, Henry.....	Druggist, Parkston
Thomas, John C.....	Druggist, Marion

**Class of 1903.****MASTER OF SCIENCE.**

Crane, Austin B.....	Civil Engineer, Kettle Falls, Wash.
Hoy, Howard H.....	Inst. in Phy. and El. Eng., S. D. S. C.

**BACHELOR OF SCIENCE.**

Almond, Fred C.....	Died March 12th, 1909, at Clear Lake
Cole, John S., Examiner of Dry Land Agr. Exp. Stations, Dept. of Agr., Washington, D. C.	

Cuckow, Fred W.....	Lawyer, Elkton
Drew, Letta (Colegrove).....	Brookings, S. D.
Holbein, Minnie (Hubbart).....	Lansford, N. D.
Johnson, Isaac.....	Lumberman, Brookings
Kendall, M. Krete.....	Brookings
Langdon, Alice.....	Stenographer, Brookings
Miller, Shirley P.....	Student, Berlin, Germany
Norton, Frank A.....	National Canning Co., Aspinwall, Pa.
Otterness, Jens M.....	Deputy State Food Insp., Vermillion
Peirce, E. Esther.....	Teacher, Brookings
Prell, Louise (Seide).....	Calamus, Iowa
Sanborn, Ethel I.....	Teacher, Date, S. D.
Sarvis, Roscoe J.....	Student, Univ. of Minn., Minneapolis
Webster, James L.....	Minister, Morris, Ill.
Westcott, Geo. R.....	Civil Engineer, St. Louis, Mo.

**PHARMACY GRADUATES.**

Drew, Arthur W....	Medical Student, North Western Univ., Chicago
Hall, Roy J.....	Druggist, Oldham
Heston, Edward C.....	Physician, Seattle, Wash.
Hollister, Arthur R.....	Druggist, Madison
Howell, John E.....	Chemist S. P. R. R., Houston, Tex.
Johnston, Samuel.....	Druggist, Vienna
Norton, Frank A....	Chemist, National Canning Co., Aspinwall, Pa.
Steiner, Frederick W.....	Physician, Havre de Grace, Md.
Trumm, Robert E.....	Druggist, Hayti
Van Dusen, Fred J.....	Merchant, Spearfish
Williams, Percy.....	Medical Student, Chicago, Ill.
Young, Alfred J.....	Druggist, Oakes, N. D.

**Class of 1904.****MASTER OF SCIENCE.**

Trooien, Ole N.....	Contractor in Concrete Work, Detroit, Mich.
---------------------	---

**BACHELOR OF SCIENCE.**

Binford, Wm. W.....	Lumberman, Caldwell, Idaho
Kelton, Maude (Bushnell).....	Henry, S. D.
Loucks, Anna Y.....	Brookings
Mattice, Albert F.....	Student Johns Hopkins, Baltimore, Md.
McGarry, Lawrence R.....	Bank Cashier, Mansfield
Ruth, Thomas H.....	Veterinary Surgeon, De Smet
Sanderson, Everett G.....	Farmer, Arapahoe, Col.
Sherwin, Ralph L.....	Civil Engineer, Scranton, Pa.
Smith, Wm. H.....	Auburn Seminary, Auburn, N. Y.
Thompson, Clarence.....	Farmer, Dell Rapids
Walter, L. Erving.....	Manila, P. I.

**PHARMACY GRADUATES.**

Anderson, Ernest.....	Druggist, South Shore
Dillon, Cornelius.....	Druggist, Eugene, Ore.
Frick, Harry E.....	Druggist, Wessington, Springs
Goodale, Alton R.....	Druggist, Aberdeen
Hooker, Henry.....	Physician, Danville, Ill.
Koch, Arthur E.....	Assistant in Chemistry, Brookings
Ramsdell, Leonard C.....	Druggist, Spokane, Wash.
Thompson, Gottfried.....	Medical Student, Philadelphia
Weisflock, Theodore.....	Druggist, Frankfort

**Class of 1905.****MASTER OF SCIENCE.**

Hepner, Frank E....	Ass't Station Chemist, U. of Wyoming, Laramie
Norton, Frank A.,	Chemist for National Canning Co., Aspinwall, Pa.
Phillips, C. Louise.....	Ass't Librarian, S. D. S. C.
Thompson, Clarence.....	Farmer, Dell Rapids
Walter, L. Erving.....	Manila, P. I.

**BACHELOR OF SCIENCE.**

Boyden, Guy L.....	Student of Medicine, Chicago, Ill.
Chappell, Bessie.....	Teacher, Sioux Falls
Davis, Clifford W.....	Merchant, Brookings
Elliott, Roy K.....	Electrician, Atlanta, Georgia
Fishback, Van Dusen.....	Bank Clerk, Brookings
Forrest, Victor E.....	Contractor, Tyndall
Fulkerson, Vincent.....	Special Agent, Dept. of Agr., Fallon, Nev.
Grove, Mary I.....	Registrar, S. D. S. C.
Hage, Christian F.....	Druggist, Norden
Howg, Edwin M.....	Physician, St. Paul, Minn.
Jensen, Lewis N.....	Farmer, Terrill, Tex.
Johnson, Carl L.....	Electrician, Schenectady, N. Y.
Loucks, Della M. (Fassett).....	Watertown
Mathews, Harry E.....	Supt. Forest Reserve, Las Vegas, Nevada
Miller, Ralph L.....	Lumberman, Carrington, N. D.

---

Murphy, Matt W.....	Lawyer, Fargo, N. D.
Nelson, John Harland, Prof. Structural Eng., Case School of Applied Sc., Cleveland, O.	
Ronning, Oscar E.....	Teacher, Ortley, S. D.
Schaphorst, Wm. F., Ass't Prof. Mechanical Eng., State Ag. College, Mesilla Park, N. M.	
Seeger, Adolph M.....	Marietta, Minn.
Slocum, Ina S.....	Music Teacher, Vancouver, B. C.
Thogerson, Arthur A.....	Contractor, Portland, Ore.
Walters, Daisy .....	Teacher, Bruce
Williams, Harry.....	Bank Clerk, Brookings
Williams, Percy.....	Medical Student, Chicago, Ill.
Wilson, Elsie (Chappell).....	Brookings

### PHARMACY GRADUATES.

Fjerestad, Carl.....	Druggist, Elkton
Howg, Edwin M.....	Physician, St. Paul, Minn.
Larson, Lars P.....	Teacher, Howard
Mathews, Harry E.....	Supt. Forest Reserve, Las Vegas, Nev.
McCurdy, Walter.....	Druggist, Lane
Morton, Grant J.....	Federal Drug Inspector, Spokane, Wash.
Pottinger, Geo.....	Drug Clerk, Dell Rapids
Thompson, Clarence.....	Farmer, Dell Rapids
Volin, Porter.....	Medical Student, Chicago

### Class of 1906.

### BACHELOR OF SCIENCE.

Aldrich, G. Malcolm.....	County Sup't., Brookings
Barrett, J. Wylie.....	Elec. Eng., Mitchell
Burghardt, Roy D.....	Electrician, Seattle, Wash.
Carpenter, Abbie J.....	Dom. Sc. Teacher, Grand Rapids, Minn.
Chilcott, Ellery F., Special Agent Dep't of Agriculture, Amarillo, Tex.	
Coller, Fred A.....	Student, Harvard University
Dillman, Bee (Bonesteel).....	Newell, S. D.
Erstad, Alfred J.....	Electrician, Seattle, Wash.
Evans, Edna V.....	Stenographer, Brookings
Grace, Gladys (Davies).....	Akron, Col.
Grace, Oliver.....	Supt. Sub. Sta., Akron, Col.
Kennard, Frank L.....	Sup't. Sub. Sta., Dalhart, Tex.
Knox, Arthur H.....	Farmer, Alpena
Koch, Arthur E.....	Ass't. in Chemistry, S. D. S. C.
Moffatt, Margaret E.....	Teacher, Brookings
Reich, Rose M.....	Ass't. Co. Supt., Brookings
Thornber, Jessie B.....	Ins. in Dom. Sc., Tucson, Ariz.
Wellington, Ellen (Brownwell).....	Los Angeles, Cal.
Youngberg, Guy E.....	Student, S. D. S. C.



**PHARMACY GRADUATES.**

Allison, Harold.....	Medical Student, Chicago, Ill.
Bergeim, Olaf.....	Drug Clerk, Pasadena, Cal.
Grace, Gladys (Davies).....	Akron, Col.
Harben, Bartlett L.....	Druggist, Gregory
Locke, Chas.....	Drug Clerk, Webster
Wipf, Michael J.....	Bank Clerk, Alsen, N. D.

**Class of 1907.****MASTER OF SCIENCE.**

Culhane, Michael E.....	Lawyer, Brookings
-------------------------	-------------------

**BACHELOR OF SCIENCE.**

Binnewies, Mabel E.....	Teacher, Colman
Briggs, Stephen F.....	Manufacturer, Milwaukee
Burch, Walter S.....	Gen. Elec. Co., Schenectady, N. Y.
Christianson, Christine.....	Science Teacher, Auburn, Wash.
Dillman, Arthur C.....	Special Agent, Dept. of Agr., Newell, S. D.
Dutcher, Adams R.....	Ass't. in Chemistry, S. D. S. C.
Elliott, Bruce A.....	Inst. Math., Roseburg, Ore.
Elliott, Ross W.....	Manual Training, Columbus, Nebr.
Fjerestad, Alman.....	Bank Clerk, Estelline
Gagel, Gerald.....	Electrician, Redlands, Cal.
Hofstetter, Geo., Instructor in Manual Training, Govt. School, P. I.	
Kirk, John R.....	Farmer, Springfield
Johnson, Aaron G.....	Ass't. in Bot. Purdue Univ., Lafayette, Ind.
McCordic, Clare.....	Western Elec. Co., Chicago, Ill.
McElmurry, Rilla.....	Dietitian, Chicago, Ill.
Morton, Grant J.....	Federal Drug Inspector, Spokane, Wash.
Reich, J. Carl.....	Western Elec. Co., Chicago, Ill.
Salmon, Cecil.....	Special Agent Dept. Agr., Newell
Sanderson, Eugene..	Insp. Depot, New York City
Trooien, Mabel (Knutson).....	Detroit, Mich
Tuttle, Volney J.....	Gen. Elec. Co., Schenectady, N. Y.
Underwood, Genevieve.....	Teacher, Watertown
Westcott, Ruth M.....	Inst. S. D. S. C., Brookings
Work, Mary L.....	Teacher, Watertown

**PHARMACY GRADUATES.**

Dexter, David F.....	Real Estate, Centerville
Roney, Ray W.....	Druggist, Chester
Ennis, Herbert I.....	Druggist, Bruce
Kartrude, Inga M.....	Student, S. D. S. C.

**Class of 1908.****MASTER OF SCIENCE.**

Coller, Fred A.....	Student, Harvard University
Koch, Arthur E.....	Ass't. in Chemistry, S. D. S. C.



**ELECTRICAL ENGINEER.**

Elliott, Ross W.....Manual Training, Columbus, Neb.

**BACHELOR OF SCIENCE.**

Alton, Benjamin H.....Ass't. in Zoology, S. D. S. C.  
 Bergeim, Olaf.....Drug Clerk, Pasadena, Cal.  
 Carpenter, Clarence A.....Teacher, Rapid City  
 Chilcott, Ralph A.....Farmer, Fairfax Courthouse, Va.  
 Cooley, William R.....Farmer, Tabor  
 Griffith, T. Edwin.....Electrical Engineer, Sioux City, Ia.  
 Holsey, Ernest.....Electrical Engineer, Sioux Falls  
 Hubbart, Edith J.....Teacher, Lansford, N. D.  
 Hyde, Hallie W.....Student, University of Illinois  
 Kelly, Amy.....Inst. in Dom Sc. S. D. S. C.  
 Kendall, Nellie G.....Student, Evanston, Ill.  
 Locke, Francis J.....Electrical Engineer, Norwood, Ohio  
 Mathews, Oscar R.....Expert Dry Land Agr., Newell  
 Mayland, Amy.....Died Feb. 17, 1909  
 Mayland, George R.....Brookings  
 Nelson, Aaron L.....Electrician, Schenectady, N. Y.  
 Nilsson, Edward.....Student, L. S. Art School, Kalamazoo, Mich.  
 Olberg, Fred C.....Drug Clerk, Seattle, Wash.  
 Perry, William J.....Electrician, Schenectady, N. Y.  
 Soreng, Edward M.....Electrician, Milwaukee, Wis.  
 Sperb, John J.....Civil Engineer, Portland, Ore.  
 Ulrich, Darwin William.....Electrical Engineer, Seattle, Wash.  
 Underwood, Beatrice.....Teacher, Watertown  
 Underwood, Loto R.....Teacher, Watertown  
 Weeks, Gordon A.....Mechanical Engineer, Livingston, Mont.  
 West, Florence E.....Student, University of Minnesota, Minneapolis  
 Whitehead, Lindsey W.....Instructor in Mathematics, S. D. S. C.  
 Williams, Ruby.....Teacher Brookings

**PHARMACY GRADUATES.**

Murphy, James P.....Drug Clerk, Huron  
 Quiggle, Ernest J.....Drug Clerk, Groton  
 Hoch, Joseph L.....Drug Clerk, Elkton  
 Olberg Fred C.....Drug Clerk, Seattle, Wash.

**Class of 1909.****MASTER OF SCIENCE.**

Oscar Mathews.....Expert Dry Land Agriculture, Newell

**MECHANICAL ENGINEER.**

William Schaphorst..Asst. Prof. Mech. Eng., State Ag. College,  
 Mesilla Park, N. M.

**ELECTRICAL ENGINEER.**

Bruce Elliott.....Instr. in Mathematics, Roseburg, Oregon

**BACHELOR OF SCIENCE.**

Bacon, Eva F.....	Teacher, Brookings
Bushnell, Edna.....	Student, S. D. S. C.
Camp, Fred.....	Photographer, Lake Benton, Minn.
Catlett, Winifred.....	Student, S. D. S. C.
Champlin, Manley.....	Special Agent, Dept. of Ag., Highmore
Clarke, Roy.....	Theological Student, Meadville, Penn.
Coughlin, Chas.....	Electrician, Milwaukee, Wis.
Denhart, Cecil.....	Real Estate, White
Erwin, Ada.....	Student, S. D. S. C.
Evans, Iva.....	Student, S. D. S. C.
Furnstahl, John.....	Civil Engineer, Hibbing, Minn.
Jensen, Harvey.....	Law Student, Brookings
Jones, Robert.....	Law Student, Minneapolis
Kremer, Alvin.....	Bank Clerk, Brookings
Lane, Lloyd.....	Farmer, Coal Springs, S. D.
McKeown, Ralph.....	Civil Engineer, Burns, Mont.
Marquis, Sidney.....	Student, Washington, D. C.
Matheny, Chester.....	Electrician, Schenectady, N. Y.
Odland, John.....	Farmer, Sentinel Butte, N. D.
Palm, Ellen.....	Teacher, Norden
Peirce, Ruth.....	Student, S. D. S. C.
Phillips, Geo.....	Y. M. C. A. Secretary, S. D. S. C.
Sarvis, Johnson.....	Ass't. in Agronomy, S. D. S. C.
Sperb, Frank.....	Civil Engineer, Portland, Ore.
Swering, Joe.....	Electrician, Brookings.
Treacy, Timothy.....	Theological Student, Somerset, O.
Vernlund, Carl.....	Ass't. in Vet. Med., S. D. S. C.
White, Orland.....	Ass't. in Botany, S. D. S. C.
Wickre, Jacob.....	Farmer, Langford
Wright, Mary.....	DeSmet

**PHARMACY GRADUATES.**

Abbott, Guy S.....	Druggist, Brookings
Buck, Ervin.....	Drug Clerk, Brookings
Crosby, LeRoy.....	Drug Clerk, Hitchcock
Dickey, James.....	Drug Clerk, Iroquois
Hage, Christian.....	Druggist, Norden
Wilson, Frank M.....	Drug Clerk, Brookings
Youngberg, Guy.....	Student, S. D. S. C.

## STUDENT LIST

---

### Graduate Students

Bushnell, Edna.....	Brookings
Catlett, Winifred.....	Brookings
Erwin, Ada.....	Brookings
Evans, Edna.....	Brookings
Evans, Iva.....	Brookings
Hofstetter, George.....	Manila
Sarvis, Johnson.....	Brookings
Vernlund, Carl.....	Astoria
White, Orland.....	Delmont
Whitehead, Lindsey.....	Brookings

### COLLEGIATE STUDENTS

---

#### Seniors

Atkinson, Fay.....	General Science.....	White
Barber, Floyd.....	Civil Engineering.....	Alpena
Biggar, Howard.....	General Science.....	Brookings
Crothers, Harold.....	General Science.....	Brookings
Crothers, Ralph.....	Agriculture .....	Brookings
Fickle, Walter.....	Civil Engineering.....	Blunt
Fridley, Ray.....	Electrical Engineering.....	Brookings
Grotta, Edwin.....	Civil Engineering.....	Manchester
Johnson, Chas.....	Civil Engineering.....	Hetland
Johnson, Milla.....	Home Economics.....	Hardwick, Minn.
Kartrude, Inga.....	Pharmacy .....	Hardwick, Minn.
Kelly, Thos. B.....	General Science.....	Brookings
Lothrop, Elmer.....	Electrical Engineering.....	Academy
Lloyd, Robert.....	Electrical Engineering.....	Brookings
Matheny, Alice.....	Home Economics.....	Brookings
Matheny, Fred.....	Civil Engineering.....	Conde
Morrison, Joseph.....	Pharmacy .....	Top Bar
Nagel, Herman.....	Agriculture .....	Berlin, Germany
Ort, Albert.....	Civil Engineering.....	Bensenville, Ill.
Palm, Andrew.....	Agriculture .....	Norden
Randall, Frank.....	Mechanical Engineering.....	Brookings
Sexauer, Elmer.....	General Science.....	Brookings
Sheldon, Nettie.....	General Science.....	Brookings
Wahl, William.....	Civil Engineering.....	Columbia
Welch, Cecile.....	General Science.....	Brookings
Wohlheter, Vern.....	General Science.....	White
Yocom, Frank.....	General Science.....	Parker

#### Juniors

Atwood, George.....	Agriculture .....	Erwin
Balmat, John H., Jr.....	Civil Engineering.....	Yankton



---

Cooledge, Leslie.....	General Science.....	DeSmet
Erwin, Ruth.....	Home Economics.....	Brookings
Finley, P. Vollmar.....	Agriculture .....	Miller
Fridley, Bess.....	Home Economics.....	Brookings
Fridley, Richard.....	Agriculture .....	Brookings
Fromme, Fred.....	Agriculture .....	Richmond, Ind.
Gropengieser, Fred.....	Electrical Engineering.....	Onida
Haas, Carrie.....	General Science.....	Arlington
Hallen, Harold.....	Electrical Engineering.....	Brookings
Hegdahl, Paul.....	Civil Engineering.....	Madison
Huntimer, Percy.....	Agriculture .....	Madison
Jarman, Maebelle.....	Home Economics.....	Brookings
Johnson, Clifford.....	Agriculture .....	Hitchcock
Knutson, Geneva.....	Home Economics.....	Brookings
Ladd, Amy.....	Home Economics.....	Brookings
McMillan, O. G.....	Electrical Engineering.....	Alpena
Matthews, Irvin.....	Civil Engineering.....	Madison
Mathewson, Lynn.....	Mechanical Engineering.....	Tripp
Meharg, Max.....	Electrical Engineering.....	Brookings
Mitchell, Harry.....	Electrical Engineering.....	DeSmet
Odland, Ole M.....	Civil Engineering.....	Parker
Pence, Clay.....	Electrical Engineering.....	Howard
Peterson, Helen.....	Home Economics.....	Brookings
Plocker, Florence.....	Home Economics.....	Brookings
Quinn, Roy.....	Agriculture .....	Arlington
Radcliffe, Stewart.....	Electrical Engineering.....	Howard
Sherwin, Muriel.....	Home Economics.....	Brookings
Skinner, Lila.....	Home Economics.....	Brookings
Starring, Cecil.....	Agriculture.....	Battle Creek, Neb.
Swenehart, John.....	Agriculture .....	Brookings
Throop, Lotta.....	Home Economics.....	Brookings
Tinker, Mabel.....	Home Economics.....	Brookings
Ulrich, George.....	Electrical Engineering.....	Alma, Wis.
Walters, Leonard.....	Agriculture .....	Bruce
Wilson, Roy.....	General Science.....	Brookings

### Sophomores

Acheson, Roy.....	Civil Engineering.....	Montrose
Basgen, Fred.....	Electrical Engineering.....	Goodwin
Bibby, Irwin J.....	Agriculture .....	Galesville, Wis.
Bisby, Guy.....	Pharmacy .....	Aurora
Brown, George.....	Pharmacy .....	Clark
Carey, Edward.....	Mechanical Engineering.....	Bryant
Crane, Vance.....	Civil Engineering.....	DeSmet
Dachtler, Fred.....	Civil Engineering.....	Sturgis
Denhart, William.....	Agriculture .....	White
Edson Ray.....	Electrical Engineering.....	Alcester



---

Engstrom, Carl.....	Electrical Engineering.....	Redfield
Erdmann, Henry.....	Agriculture .....	Corsica
Goldthorp George.....	Pharmacy .....	Turton
Granger, Paul.....	Electrical Engineering.....	Brookings
Hemingway, Robert.....	General Science.....	Brookings
Herse, Harry.....	Agriculture .....	Canova
Jensen, Russell.....	Agriculture .....	Mitchell
Kilpatrick, A. V.....	Mechanical Engineering.....	Houghton
King, C. Stanley.....	Civil Engineering.....	South Shore
Marchant, Guy.....	Electrical Engineering.....	Brookings
Oakland, Irwin.....	Agriculture .....	Corsica
Osborn, Lynn.....	Agriculture .....	Flandreau
Palmer, Hattie.....	General Science.....	Brookings
Peck, Arthur R.....	Electrical Engineering..	Windsor, Conn.
Pier, Clarence.....	Agriculture .....	Woonsocket
Pratt, Chas. V.....	Electrical Engineering.....	Brookings
Reeve, John.....	Electrical Engineering.....	Howard
Revell, Grace.....	General Science.....	Brookings
Sauder, William.....	Agriculture .....	Milwaukee, Wis.
Sawyer, Clyde.....	Electrical Engineering.....	Howard
Schaphorst, Ben.....	Electrical Engineering.....	Brookings
Sparks, Henry.....	Civil Engineering.....	Sturgis
Stearns, Arthur.....	Electrical Engineering.....	Pierre
Welker, V. B.....	Electrical Engineering.....	Redfield
Williams, Arthur R.....	Pharmacy .....	Langford

### Freshmen

Anderson, Elmer.....	Pharmacy .....	Veblen
Axness, Melvin.....	Pharmacy .....	Sisseton
Bacon, Harry.....	Pharmacy .....	Brookings
Bell, Claude.....	Agriculture .....	Urbana, Ill.
Brigham, Ruth.....	General Science.....	Brookings
Buckley, Herbert.....	Electrical Engineering.....	Huron
Bushey, Alfred.....	Civil Engineering.....	Castlewood
Clark, Robert.....	Pharmacy .....	Fort Pierre
Cole, Glenn.....	Agriculture .....	Gary
Cochran, George.....	Mechanical Engineering.....	Clark
Crosier, Frank.....	General Science.....	Brookings
Dunn, Everett.....	Electrical Engineering.....	Summit
Dye, Grace.....	Home Economics.....	Richards
Earl, Lorne.....	General Science.....	Mt. Vernon
Fellows, Carl.....	Pharmacy .....	Plankinton
Girton, John.....	Electrical Engineering.....	Madison
Gleason, George.....	Pharmacy .....	Sioux Falls
Gough, Oscar.....	Civil Engineering.....	Canova
Grant, Clyde.....	Pharmacy.....	Walnut Grove, Minn.
Greenly, Maurice.....	General Science.....	Brookings

---

Grinols, Hazel.....	Home Economics.....	Brookings
Hall, Warren S.....	Civil Engineering.....	Winfred
Hanson, Walter.....	Mechanical Engineering.....	Howard
Hewitt, Curtiss J.....	Civil Engineering.....	Egan
Hyde, Lloyd.....	General Science.....	Brookings
Johnson, Elmer.....	General Science.....	Brookings
Johnston, Sarah.....	General Science.....	Brookings
Kayser, Emil.....	Civil Engineering.....	Parkston
Knappen, Russell.....	General Science.....	Brookings
Kremer, Ralph.....	Agriculture .....	Brookings
Landweer, Earl.....	Electrical Engineering.....	Hartford
Lockhart, James.....	Electrical Engineering.....	Brookings
Macomber, James.....	Electrical Engineering.....	Hudson
Matheny, Hazel.....	Home Economics.....	Conde
Mathews, Arthur.....	Electrical Engineering.....	Brookings
Morrow, Strayer.....	General Science.....	Brookings
Morton, Richard.....	Pharmacy .....	Sisseton
Nilsson, Anna.....	General Science.....	Gary
Nord, Roy A.....	General Science.....	Brookings
Rilling, Harry.....	General Science.....	Brookings
Sanderson, Harry M.....	Agriculture .....	Brookings
Schoenwether, Vernon.....	Agriculture .....	Greenacres, Wash.
Serles, Earl.....	Pharmacy .....	Salem
Shanley, Clarence.....	Agriculture .....	Mansfield
Sharp, Edwin.....	Agriculture .....	Bristol
Shepard, Albert.....	General Science.....	Brookings
Sloan, Samuel.....	Agriculture .....	Brookings
Sloan, Edith.....	Home Economics.....	Brookings
Somers, Grace.....	Home Economics.....	Summitt
Soule, Roy.....	Pharmacy .....	Brookings
Soule, Scott.....	Pharmacy .....	Brookings
Templeton, Mabel.....	General Science.....	Wessington
Thomas, Chas.....	Agriculture .....	Springfield
Vercoe, Lewis.....	Civil Engineering.....	Carthage
Wood, Ruth.....	General Science.....	Hot Springs

---

## SPECIAL COLLEGIATE STUDENTS

---

Brown, Bessie.....	Hartford
Chamberlain, Ralph.....	Brookings
Chappell, William.....	Brookings
Cole, Jessie.....	Brookings
Fowlds, Mathew.....	Hendricks, Minn.
Heiser, Agnes.....	White
Hubbart, Kittle.....	Brookings
Huyck, Esther.....	Lebanon
Irwin, Bessie.....	Lolo, Mont.

---

Karlstad, Selma.....	Brookings
Keland, Olaf.....	Brookings
Levitt, Lola.....	Arlington
Orth, Ruby.....	Flandreau
Palmer, Hattie.....	Brookings
Peterson, Ora.....	Brookings
Pond, Dayton.....	Brookings
Skinner, Lela.....	Brookings
Smith, Mamie.....	Brookings
Tyler, John.....	Hartford

---

## PREPARATORY STUDENTS

---

### Third Year

---

Allison, Arthur.....	Cavour
Bacon, Lois.....	Gettysburg
Brookens, P. Floyd.....	Parker
Caverhill, Frances.....	Estelline
Evans, Roy.....	Brookings
Dahle, Alfred.....	Brookings
Dyce, Reuben.....	Wentworth
Dye, Pearl.....	Richards
Erbe, George.....	Caledonia, Wis.
Faulkner, Hugh.....	Burkmere
Garver, Harvey.....	Blunt
Hills, Kenneth.....	Montrose
Houghton, Jay.....	Osceola
Joseph, William.....	Iroquois
Lawler, Frank.....	Ree Heights
Lenocker, Jacob E.....	Brookings
Leonard, Fred J. L.....	Estelline
Marquardt, Elizabeth.....	Wentworth
Mayland, Guy.....	Brookings
Mears, Hugh.....	Bancroft
Nylander, Alice.....	Estelline
Orth, Dora.....	Flandreau
Patterson, Edith.....	Canova
Potter, Lew L.....	Webster
Purinton, Ernest.....	Sturgis
Rehnke, William.....	Crandon
Troupe, James E.....	Colman
Waltner, Jonathan.....	Freeman
Webster, Chas. E.....	Hurley
Wornson, Walter.....	Hadley, Minn.

## Second Year

Aldridge, Sherman.....	Armour
Allen, Nina.....	Brookings
Allinson, Eva.....	LaDelle
Bacon, Lois.....	Gettysburg
Bacon, Lulu.....	Brookings
Bennett, Susie.....	Brookings
Burgess, John.....	White
Culhane, Alex. F.....	Elkton
Culhane, James.....	Elkton
Culhane, Roger J.....	Elkton
Etting, Ruth.....	Brookings
Fjerestad, Anna.....	White
Fournier, Leon.....	Cambridge, Mass.
Gamble, Chas.....	Brookings
Graham, Myron F.....	Beresford
Guse, Albert.....	Bryant
Hanson, Jennie.....	Viborg
Hebal, Eldon.....	Goodwin
Holliday, Lloyd.....	Brookings
King, Chas.....	Brookings
Lawrence, E. Kent.....	Carthage
Lawson, Harvey.....	Alcester
Ladd, Bessie.....	Brookings
McCaughey, Marguerite.....	Letcher
McGilvray, Duncan.....	Valley Springs
Meyer, John C.....	Marcus, Ia.
Nord, Florence.....	Brookings
Quinn, Arthur.....	Arlington
Ribstein, Luella.....	Bruce
Ripley, Lyrl.....	Ramona
Sample, Evangeline.....	Brookings
Schunzel, Minnie.....	Crandon
Scotchbrook, Frances.....	Wessington
Setbacken, Anna.....	Lake Preston
Setbacken, Alice.....	Lake Preston
Snesrud, Alner G.....	Kasson, Minn.
Stephenson, Richard.....	Somers, Iowa
Stone, Harvey.....	Aurora
Storm, Alvinia.....	Brookings
Tufty, Mattie.....	Brookings
Walton, Arthur.....	Hitchcock
Wellman, Ernest.....	Colman
White, Henry.....	Delmont



### First Year

Alrick, Lilly.....	Brookings
Anderson, Leslie.....	Brookings
Barkley, Edsel.....	Garden City
Bevington, Ray.....	Ree Heights
Bogstie, Emma.....	Clear Lake
Bogstie, Olaf.....	Clear Lake
Colborne, Bernice.....	Brookings
Davies, Earl.....	Armour
Digre, Martin.....	Hendricks, Minn.
Donaldson, Neill.....	Brookings
Else, Eugene.....	Doland
Else, Nellie.....	Doland
Fryer, Julia.....	Doland
Grau, Albert W.....	Miranda
Grinols, Mavis.....	Brookings
Idland, Gunnar.....	Plankinton
Jekyll, Arthur L.....	Highmore
Jespersion, A. P.....	Brookings
Johnson, Amanda.....	Verdi, Minn.
Kersten, Chas. V.....	Farmer
Klebsch, John H.....	Redfield
Kleine, Mildred.....	Magnolia, Minn.
LaMay, Grace.....	Brookings
Larson, Emigene.....	Flandreau
Lewis, W. Carl.....	Phillips, Neb.
Lynch, Edward.....	Brookings
Martinson, Annie.....	Brookings
Matthiesen, Frieda.....	Luverne, Minn.
Nelson, Ervie G.....	Clear Lake
Newgard Keise.....	Elk Point
Pardau, Earl.....	Watertown
Reinius, Roy.....	Sioux Falls
Ripley, Blanch.....	Ramona
Rothlisberger, Carl.....	Woonsocket
Ruchti, Rudolph.....	Houghton
Scotchbrook, Carl.....	Wessington
Smith, Archie.....	Kidder
Street, Thomas M.....	Albee
Svarstad, Iver.....	Bath
Trygstad, George.....	Brookings
Ward, Chas. A.....	Snoma

### Commercial Students

Berg, Oscar E.....	Stockholm
Bergeim, Rena.....	Brookings
Bixler, Edna.....	Hitchcock
Bixler, Effie.....	Hitchcock

---

Brill, Vernal.....	Lemmon
Casley, Bertha.....	Brookings
Dakin, Mamie.....	Brookings
Durland, Benj.....	Brookings
Ehrenrich, Ida.....	Brookings
Gilbert, Glenn J.....	Brookings
Haugen, Thorwald.....	Brookings
Hartwick, Albert.....	Brookings
Helgersen, Bessie.....	Nunda
Heiser, Elizabeth.....	White
Jensen, Ross.....	Brookings
Johnson, Alvin.....	Brookings
Johnson, Clifton.....	Brookings
King, Laura.....	Brookings
King, Katherine.....	South Shore
Larson, Elmer.....	Colton
Lofgren, Everett.....	Claremont
Lynch, Ruth.....	Brookings
Madden, Florence.....	Brookings
Mailey, Ina.....	Brookings
Miller, Laura V.....	Tyler, Minn.
Molesworth, Thos.....	Clark
Nelson, Elmer.....	Kidder
Nelson, Rachel.....	Toronto
Nettum, Rena.....	Lake Preston
Oakland, Ruby.....	Corsica
Phillips, Laura.....	Aurora
Plattner, Fred.....	Tyndall
Quam, Connell.....	Mansfield
Ripley, E. R.....	Ramona
Rosenthal, Joseph.....	Clark
Ruttum, Julius.....	Hendricks, Minn.
Sample, Joseph.....	Brookings
Saur, Emil.....	Conde
Severson, Chester.....	Brookings
Smith, William.....	Brookings
Tauer, Frank.....	Watertown
Thompson, Alfred.....	Colson
Tinker, Bessie.....	Brookings
Tracy, Claude.....	Wessington Springs
Treacy, James P.....	DeSmet
Tyson, Mabel.....	Brookings
Van Dyke, Hortense.....	Brookings
Ulring, Thea.....	Luverne, Minn.
West, Amy.....	Brookings
Wuertz, William.....	Hartford
York, Troyet.....	Winthrop

## Music Students

Allinson, Eva.....	Piano .....	LaDelle
Alrick, Lilly.....	Piano .....	Brookings
Austin, Lillian.....	Piano .....	Clark
Bacon, Lois.....	Piano .....	Gettysburg
Behrens, Anna.....	Piano .....	Hermosa
Bixler, Edna.....	Piano and Voice.....	Hitchcock
Bogstie, Emma.....	Piano .....	Clear Lake
Boice, Mildred.....	Voice .....	South Shore
Brown, Bessie.....	Piano .....	Hartford
Brynjulson, Alpha.....	Voice .....	Canton
Casley, Lulu.....	Piano .....	Brookings
Caverhill, Frances.....	Voice .....	Castlewood
Caverhill, William.....	Wind Instrument.....	Castlewood
Chamberlain, Ralph.....	Piano .....	Brookings
Dye, Grace.....	Voice .....	Richards
Dye, Pearl.....	Voice .....	Richards
Earl, Lorne.....	Piano .....	Mt. Vernon
Else, Eugene.....	Piano .....	Doland
Else, Nellie.....	Piano and Vo'ce.....	Doland
Etting, Ruth.....	Piano .....	Brookings
Faulkner, Hugh.....	Violin .....	Burkmere
Fjerestad, Anna.....	Piano .....	White
Fridley, Bess.....	Voice .....	Brookings
Fryer, Julia.....	Piano .....	Doland
Gamble, Chas.....	Piano .....	Brookings
Gardner, George.....	Violin and Voice.....	Orient
Grau, Albert.....	Violin .....	Miranda
Gilbert, Winnie.....	Violin .....	South Shore
Grinols, Mavis.....	Piano .....	Brookings
Groff, Mabelle.....	Voice .....	Brookings
Hanson, Eunice.....	Piano .....	Hurley
Hanson, Jennie.....	Piano and Voice.....	Viborg
Heiser, Agnes.....	Voice .....	White
Holien, Matilda.....	Voice .....	Jasper, Minn.
Hoxeng, Josephine.....	Piano .....	Volin
Hubbart, Kittie.....	Piano .....	Brookings
Huyck, Esther.....	Piano .....	Lebanon
Johnson, Amanda.....	Piano .....	Verdi, Minn.
Johnson, Emma.....	Piano .....	Dell Rapids
Jones, Lilly.....	Piano .....	Ipswich
Kleine, Mildred.....	Piano .....	Magnolia, Minn.
Ladd, Bessie.....	Piano .....	Brookings
La May, Grace.....	Piano .....	Flandreau
Larson, Emigene.....	Piano .....	Flandreau
Lawson, Harvey.....	Piano .....	Alcester
Leekley, Aurora.....	Piano .....	Brookings

Levitt, Lola.....	Piano	Arlington
Lindskog, Telia.....	Voice	Brookings
Lofgren, Everett.....	Wind Instrument.....	Claremont
McCaughey, Marguerite.....	Voice	Letcher
McLaury, Herman.....	Piano	Milltown
Miller, Laura V.....	Piano	Tyler, Minn.
Moen, Gertrude.....	Piano	Hudson
Molskness, Mattie.....	Piano	Colman
Nelson, Elmer.....	Wind Instrument.....	Kidder
Nelson, Rachael.....	Piano	Toronto
Newgard, Keise.....	Voice	Elk Point
Nord, Florence.....	Piano	Brookings
Nylander, Alice.....	Piano and Voice.....	Estelline
Olson, Louise.....	Piano	New London, Minn.
Olson, Mabel.....	Piano	Diamond
Orth, Ruby.....	Piano	Flandreau
Palmer, Harriet.....	Piano	Brookings
Peirce, Ruth.....	Piano	Brookings
Peterson, Ora.....	Piano	Brookings
Plattner, Fred.....	Violin	Tyndall
Quinn, Arthur.....	Voice	Arlington
Rehnke, William.....	Piano	Crandon
Ribstein, Luella.....	Piano	Bruce
Ripley, Lyril.....	Piano	Ramona
Sample, Evangeline.....	Piano	Brookings
Schraeder, Fred.....	Violin	Lake Preston
Schunzel, Minnie.....	Piano	Crandon
Scotchbrook, Carl.....	Wind Instrument.....	Wessington
Scotchbrook, Frances.....	Piano and Voice.....	Wessington
Setbacken, Alice.....	Piano	Lake Preston
Setbacken, Anna.....	Piano	Lake Preston
Skinner, Lela.....	Piano and Voice.....	Brookings
Smith, Archie.....	Wind Instrument.....	Kidder
Smith, Mamie.....	Piano	Brookings
Smith, Paul G.....	Violin	Webster
Somers, Grace.....	Piano	Summit
Storm, Alvinia.....	Piano	Brookings
Street, Thomas.....	Violin	Albee
Thompson, Florence.....	Piano	Brookings
Trygstad, George.....	Voice	Brookings
Weber, Anna.....	Piano	Farmer
Wood, Ruth.....	Voice	Hot Springs

## SCHOOL OF AGRICULTURE STUDENTS

### Second Year

Anderson, Ernest C.....	Crooks
Bauer, George J.....	Watertown



---

Batson, Wood J.....	Geddes
Biggar, James.....	Brookings
Boice, Leonard.....	South Shore
Boice, Mildred.....	South Shore
Berkey, William.....	Ashton
Brekke, Martin.....	Renner
Brenneman, Walter H.....	Wessington Springs
Brown, LaMont.....	Wessington
Connell, Fred.....	Alexandria
Eggleston, Earl.....	Parker
Gerner, Chas. A.....	Platte
Hale, Irene.....	Wessington Springs
Hood, Lee B.....	Spearfish
Johnson, Horace.....	Pierpont
Johnson, M. O.....	Pierpont
Johnson, Ward.....	Pierpont
Jones, Lilly.....	Ipswich
Kirkeby, Clarence.....	Naples
Kirsch, Elizabeth.....	Watertown
Lakings, Roy.....	Hurley
Love, J. D.....	Hartford
Lyle, William.....	Beresford
Nelson, Edward.....	Mt. Vernon
Pum, Ida.....	Watertown
Rebrud, Clarence.....	Ipswich
Schwantes, Harry C.....	Big Stone
Sharp, Millie E.....	Bristol
Speirs, John R.....	Ree Heights
Stengel, Anna.....	Milbank
Stumley, Carl.....	Volga
Watson, Earl.....	Mitchell
Wuertz, Fred.....	Hartford

### First Year

Aasen, Julius.....	Renner
Abrahamson, Melvin.....	Letcher
Arthur, Jas. R.....	Elrod
Berkey, Mary G.....	Ashton
Broich, Walter.....	Big Stone
Brown, Clark.....	Wessington
Brown, Harry.....	Waverly
Brown, Martha.....	Sherman
Buhl, Anton.....	Lindsay
Carlson, Oscar.....	Carpenter
Caverhill, Fred.....	Castlewood

---

Caverhill, William.....	Castlewood
Christopherson, Peter.....	Lily
Crist, Veda.....	Wessington Springs
Crist, Wesley.....	Wessington Springs
Downer, Nellie M.....	Freeman
Dutton, Henry I.....	Elgin, Ill.
Ettles, Olyne E.....	Mina
Fasbender, Veronica.....	Hendricks, Minn.
Flakoll, Berthold .....	Bristol
Gamet, Ward W.....	Oral
Gardner, George.....	Orient
Garrett, E. H.....	Okobojo
Gerner, Agnes.....	Platte
Gerth, Herman F.....	Estelline
Getzin, Frank.....	Humboldt
Gilbert, Winnie H.....	South Shore
Gross, Elwood.....	Madison
Gunn, Frank.....	Scotland
Hanson, Alfred.....	Bryant
Hanson, Eunice.....	Hurley
Hague, Alton.....	Highmore
Heavirland, C. Earl.....	Clark
Hinds, George H.....	New Underwood
Hoffman, Mary.....	Bruce
Horton, Harrison.....	Linden, Iowa
Jacquart, Albert A.....	Fedora
Johnson, Emma.....	Dell Rapids
Johnson, John B.....	Laurel
Johnson, Harry S.....	Bruce
Karlstad, Chas. H.....	Dempster
Keeler, Earl J.....	Frederick
Knox, William A.....	Alpena
Koch, Maggie.....	Duncan
Lathrop, J. A.....	Okobojo
Laughlin, Morris.....	Madison
Long, Chas. F.....	Vale
Lyman, Howard F.....	Ethan
Marquardt, Albert.....	Wentworth
McKinley, Elwood.....	Sunnyside
McKay, Archie.....	Orient
McLarnan, Howard.....	Vivian
Molskness, Mattie.....	Colman
Moxness, Olaf.....	Bristol
Nord, Axel O. E.....	Milbank
Norman, Evan.....	Clear Lake

---

Olson, Elsworth.....	Brookings
Olson, Oscar.....	Brookings
Olson, Peter P.....	Lily
Palmer, Bert.....	Hurley
Plattner, Carl.....	Scotland
Reeves, Delbert.....	Volga
Richards, Burnie.....	Vale
Rovang, John.....	Bryant
Rovang, Thomas.....	Bryant
Ruckle, Elva.....	Onida
Ruhlman, Robert.....	Rockham
Sanders, Carl.....	Caputa
Sanders, Frank E.....	Caputa
Sayles, John S.....	Elk Point
Schiesser, Emil.....	Volga
Schrader, Fred.....	Lake Preston
Sebring, Fred.....	Orient
Simonson, Olaf.....	Bristol
Skogstad, Alfred.....	Florence
Slocum, Marion A., Jr.....	Ipswich
Smith, John H.....	Roslyn
Smith, Paul.....	Webster
Smith, Walter.....	Selby
Soreng, Alfred.....	Florence
Stengel, Silas.....	Milbank
Stinson, Clifford.....	Clark
Strand, David E.....	Ellendale, N. D.
Weber, Anna.....	Farmer
Weldon, Floyd E.....	Oral
Welter, Henry A.....	Watertown
Whitmore, Frank.....	Madison
Williams, Robert F.....	Platte
Withee, James.....	Hurley

---

## SHORT COURSE STUDENTS

---

### Steam Engineering

---

Amundson, Amund J.....	Brookings
Avery, Clinton Hale.....	Brookings
Barkley, Edsel.....	Garden City
Bierman Fred.....	Mansfield
Bortness, John S.....	Brookings
Clark, Frank.....	Huron
Davies, Earl.....	Armour
Endal, Lars M.....	Lane

---

Faller, Otto.....	Delmont
Fieler, Henry.....	Java
Gamet, Ward W.....	Oral
Hanson, Alfred.....	Dinhoff, N. D.
Jekyll, Arthur L.....	Highmore
Johnston, Clare.....	Houghton
Jordan, Vernon.....	Ipswich
Kennedy, James G.....	Grindstone
Kliegle, Albert.....	Goodwin
Knutson, Carl.....	Bryant
Lawson, Hubert W.....	Alcester
Lowe, Clarence.....	Aberdeen
Mitchell, James H.....	Hecla
Mitchell, Logan.....	Hecla
Moore, Cecil E.....	Brentford
Moser, Reuben.....	Milbank
Nyhus, Hans.....	Dell Rapids
Petrie, J. Clyde.....	Mitchell
Quickstad, August.....	Toronto
Quickstad, Martin.....	Toronto
Raml, Wenzel.....	Goodwin
Ruttum, Julius.....	Hendricks, Minn.
Smith, Knut L.....	Gayville
Tuffy, Clifford.....	Nunda
Ward, Chas. A.....	Snoma
Zaegel, John H.....	Stickney

### Three Months Dairy Course

Anderson, Rasmus.....	Varde, Denmark
Chester, Albert.....	Toronto
Cohle, Louls.....	Dexter, Iowa
Madsan, Tolvtevar.....	Wilmot
Moen, Iver.....	Astoria
Riis, Jens.....	Denmark
Solem, Iver.....	Astoria

### Two Weeks Dairy Course

Christians, Ben.....	Waltham, Minn.
Jorgenson, C.....	Brookings
Krog, Peter.....	Lake Benton, Minn.
White, F. L.....	Seim

### Twelve Weeks Course in Agriculture

Anderson, Oscar D.....	Canova
Anderson, R.....	Manchester
Bailey, A. L.....	Rapid City



---

Bailey, Clifford.....	Sioux Falls
Clark, Raleigh.....	Armour
Gering, Jacob.....	Freeman
Hansen, A. I.....	Sturgis
Haugen, Henry.....	Lily
Hansen, Thomas V.....	Hurley
Kessel, W. E.....	Rapid City
Martin, J. R.....	Whitewood
McLaury, Herman.....	Parkston
Shayket, R. E.....	Snoma
Sedgwick, Vernon.....	Wessington Springs
Stark, C. L.....	Unityville

### Two Weeks Course in Agriculture

Anderson, Oscar D.....	Canova
Anderson, R.....	Manchester
Bailey, A. L.....	Rapid City
Bailey, Clifford.....	Sioux Falls
Bringleson, Anton.....	Armour
Clark, Raleigh.....	Armour
Fuller, C. R.....	Cavour
Gering, Jacob.....	Freeman
Hansen, A. I.....	Sturgis
Hansen, Hallie.....	Crandon
Haugen, Henry.....	Lily
Hansen, Thomas V.....	Hurley
Kessel, W. E.....	Rapid City
Martin, J. R.....	Whitewood
Miller, Roscoe.....	New Underwood
McLaury, Herman.....	Parkston
Olmstead, Eugene T.....	Brookings
Olmstead, Rett.....	Brookings
Roberts, Frank M.....	Pierpont
Shayket, R. E.....	Snoma
Sedgwick, Vernon.....	Wessington Springs
Smith, Albert.....	Gayville
Snab, A. E.....	St. Lawrence
Stark, C. L.....	Unityville
Waltner, J. R.....	Freeman
Weeks, Chas. D.....	St. Lawrence
Welch, Homer W.....	St. Lawrence
Wilson, Jesse G.....	Pierpont

### Short Course in Home Economics

Anderson, Beda.....	Naples
Behrens, Anna.....	Hermosa

---

Brende, Mary.....	Renner
Brende, Minnie.....	Renner
Brynjulson, Alpha.....	Canton
Brynjulson, Hannah.....	Canton
Christenson, May.....	Viborg
Enebo, Olga.....	Canton
Gaudig, Elizabeth.....	Wessington
Hermanson, Marie.....	Jasper, Minn.
Holien, Matilda.....	Jasper, Minn.
Hoxeng, Josephine.....	Volin
Moen, Gertrude.....	Hudson
Nelson, Elvinia.....	Irene
Olson, Mabel.....	Diamond
Peterson, Hilina.....	Clark

### Summer School Students

Alden, Catherine.....	Brookings
Alseika, Lena.....	Brookings
Alrick, Ida.....	Brookings
Armstrong, Inez.....	Brookings
Armstrong, Lillian.....	Brookings
Atwood, Mae.....	Lake Benton, Minn.
Bacon, Eva.....	Brookings
Bane, Katie.....	Aurora
Bane, Mae.....	Aurora
Barker, S. Millie.....	Stillwater, Minn.
Beals, Mamie.....	Brookings
Bergh, Ella.....	Volga
Bertness, Clara.....	Brookings
Blakely, Herbert.....	Brookings
Blakely, Mary.....	Brookings
Blanchard, Vesta.....	Brookings
Bolles, Laura.....	Brookings
Boyd, Mary.....	Brookings
Brensel, Gurina.....	Volga
Bulger, Jacob.....	White
Bulger, John.....	Bushnell
Bushnell, Edna.....	Brookings
Bradbery, Belle.....	Atlantic, Ia.
Bradbery, Mrs. Chas.....	Brookings
Caldwell, Florence.....	Brookings
Campbell, Mattie.....	Brookings
Carothers, Hazel.....	Brookings
Casserly, Elizabeth.....	Elkton
Casserly, Margaret.....	Elkton
Chappell, Bessie.....	Brookings
Chappell, Mabel.....	Brookings

---

Christenson, Minnie.....	Oldham
Christianson, Christine.....	Volga
Christianson, Malla.....	Volga
Cole, Olive.....	Brookings
Coleman, A. D.....	Bruce
Dakin, Mamie.....	Brookings
Davis, Clara.....	Brookings
Denhart, Avis.....	White
Derley, Anna.....	Hendricks, Minn.
Duff, Nettle.....	Brookings
Duff, Rena.....	Brookings
Durkin, Gertrude.....	Estelline
Eastwood, Louise.....	Bruce
Ehrenreich, Ida.....	Aurora
Eken, Selma.....	Volga
Erickson, Josie.....	Brookings
Erickson, Minnie.....	Bruce
Evans, Iva.....	Brookings
Evenson, Alvirla.....	Volga
Evenson, Edward.....	Volga
Evenson, Olaf.....	Volga
Feeney, Margaret.....	Elkton
Fleming, Loretta.....	Elkton
Getty, Janey.....	Brookings
Gleason, Rose.....	Elkton
Graff, Mae.....	Ruthland
Grovum, Cora.....	Volga
Gullick, Myrtle.....	Brookings
Gullick, Luella.....	Brookings
Gunderson, Petra.....	Volga
Hallen, Winnie.....	Brookings
Handwerk, Francis.....	Bruce
Harding, Chas.....	Brookings
Hartman, Tillie.....	Elkton
Hartwick, Albert.....	Brookings
Heck, Marie.....	Brookings
Heinson, Mabel.....	Volga
Heiser, Agnes.....	White
Heroldson, Helena.....	Bruce
Hickman, George.....	Aurora
Hilderth, A. E.....	Aurora
Hinch, Iva.....	White
Hinsverk, John.....	Hendricks, Minn.
Hoag, Edna.....	Brookings
Howard, Laura.....	Elkton
Iverson, Selma.....	Brookings
Jensen, Gladys.....	Brookings

---

Johnson, Alma K.....	Brookings
Johnson, Carrie.....	Brookings
Johnson, Ida.....	Brookings
Johnston, W. H.....	Brookings
Jolley, Mrs. Ada.....	Castlewood
Karr, Jennie.....	Brookings
Kartrude, Inga.....	Hardwick, Minn.
Kartrude, Mrs. W. L.....	Luverne, Minn.
Keenman, Francis.....	Elkton
Kremer, Henrietta.....	Brookings
Lamphier, Hattie.....	Brookings
Leete, Mae C.....	Volga
Leming, Ella G.....	Brookings
Lewis, Anna C.....	Arlington
Looysen, Sarah.....	White
Lilly, Calla.....	Aurora
Lucas, Maud.....	Brookings
Lung, Rachael.....	Elkton
Mailey, Ina.....	Brookings
McConville, Rose.....	Volga
Meyer, Ella.....	Elkton
Moe, Jettie.....	Bruce
Moffatt, Margaret.....	Brookings
Moore, Katherine.....	Avaca, Wis.
Murphy, Mary.....	Estelline
Murphy, Mae.....	Brookings
Nelson, Ida.....	Bruce
Nelson, Mabel.....	Bruce
Nelson, Pauline.....	Volga
Nessa, Celia.....	Canton
Nord, Daisy.....	Brookings
O'Brien, Elizabeth.....	Avaca, Wis.
O'Leettle, Dora.....	Arlington
Olmstead, Margaret.....	Brookings
Olmstead, R. E.....	Brookings
Otterness, Ida.....	Brookings
Palm, Anna.....	Norden
Palm, Ellen.....	Norden
Palmer, Alta.....	Brookings
Palmer, Harriet.....	Brookings
Parker, Ella.....	Bruce
Parker, Rose.....	Bruce
Peirce, Esther.....	Brookings
Perry, Jennie.....	Brookings
Peterson, Anna.....	Bemis
Peterson, Tilda.....	Elkton
Phillips, Florence.....	Brookings



---

Prentice, Jennie.....	Brookings
Prouse, Katherine.....	Brookings
Revell, Alma.....	Brookings
Revell, Grace.....	Brookings
Revell, Mary.....	Brookings
Ringsrud, Randine.....	Elk Point
Roach, Rhea.....	Brookings
Rudolph, Ray L.....	Brookings
Salk, Ida.....	Elkton
Sample, Evangeline.....	Brookings
Sanderson, Clair.....	Aurora
Sexauer, Laura.....	Brookings
Simmons, Alta.....	Brookings
Simmons, Bertha.....	Brookings
Simmons, Laura.....	White
Simmons, Roy.....	Brookings
Swenehart, William.....	Brookings
Southard, Teena.....	Aurora
Sloan, Margaret.....	Brookings
Spurling, Ethel.....	Brookings
Stark, Sophia.....	Unityville
Stearns, Mae.....	Brookings
Stebens, Celita.....	Hayes
Stephan, Amanda.....	Tolstoy
Stephan, Meta.....	Tolstoy
Stevenson, Gustava.....	Fulton
Stoddard, Mattie.....	Brookings
Storm, Alvinia.....	Brookings
Stumley, Matilda.....	Volga
Stumley, Sadie.....	Volga
Strong, Mae.....	Elkton
Strong, Loretta.....	Elkton
Tapplin, Mrs. J. E.....	Bushnell
Terry, Mary E.....	Estelline
Thompson, Alice.....	Volga
Thornton, Guy.....	Aurora
Thorsness, Anna.....	Volga
Tinker, Bessie.....	Brookings
Valentine, Lucie.....	White
Vostad, Gena.....	Volga
Waite, Frances.....	Bruce
Wallen, Dora.....	Volga
Walters, Daisy.....	Bruce
Wardall, Fannie.....	Aurora
Warness, Emma.....	Volga
Wick, Elenore.....	St. Paul, Minn.
Williams, Katie.....	Volga

---

<b>Williams, Ruby</b> .....	Brookings
<b>Winters, Minnie</b> .....	Brookings
<b>Wilson, Mary</b> .....	Aurora
<b>Wood, Nina</b> .....	Brookings

### Summary

<b>Graduate Students</b> .....	10
<b>Collegiate Students</b> —	
<b>Seniors</b> .....	27
<b>Juniors</b> .....	37
<b>Sophomores</b> .....	35
<b>Freshmen</b> .....	55
<b>Specials</b> .....	19
	—— 173
<b>Preparatory Students</b> —	
<b>Third Year</b> .....	30
<b>Second Year</b> .....	43
<b>First Year</b> .....	41
	—— 114
<b>Commercial Students</b> .....	51
<b>Music Students</b> .....	88
<b>School of Agriculture Students</b> .....	123
<b>Short Course Students</b> —	
<b>Steam Engineers</b> .....	34
<b>Two Weeks Dairy</b> .....	4
<b>Three Months Dairy</b> .....	7
<b>Twelve Weeks Agriculture</b> .....	15
<b>Two Weeks Agriculture</b> .....	28
<b>Twelve Weeks Home Economics</b> .....	16
	—— 104
<b>Summer School Students</b> .....	176
	——
<b>Total</b> .....	839
<b>Names Repeated</b> .....	108
	——
<b>Net Total</b> .....	731



# INDEX

	Page		Page
Absences.....	32	Collegian Staff and Organiza-	
Adams Act.....	18, 57	tion .....	30, 133
Admission, Conditions of.....	30	Commercial Department .....	115
Agriculture.....	35, 37, 124, 131	Conditioned Students .....	32
Agricultural Club .....	134	Contracts and Specifications... 80	
Agronomy .....	39, 63	Cooking .....	122
Agronomy Group .....	39	Creamery Work .....	131
Alternating Currents....	77	Cytology .....	92
Alumni, List of.....	136	Dairy Husbandry .....	59
Alumni Association .....	136	Dairy Husbandry Group.....	38
Anatomy .....	95	Dairy Bacteriology .....	60
Animal Breeding.....	58	Dairying .....	60, 131
Animal Husbandry .....	58	Debating .....	133
Animal Husbandry Group....	37	Degrees .....	34, 35
Animal Nutrition .....	58	Descriptive Geometry .....	73
Architectural Drawing and		Design of Power Stations....	77
Design.....	73	Domestic Art.....	69, 122
Art.....	112, 121	Dormitory .....	20, 25
Art Club.....	134	Drug Assaying .....	100
Assistants .....	10	Dynamo Design .....	77
Astronomy .....	89	Dynamo Electric Machinery... 77	
Athletics .....	28, 133	Economics .....	86
Athletic Grounds .....	20	Electrical Engineering....	46, 76
Band .....	133	Electricity and Magnetism....	76
Bacteriology .....	63	Electrical Measurements .....	77
Battalion Roster .....	134	Elements of Mechanism.....	73
Bird Life.....	94	Embryology .....	95
Bookkeeping .....	116	Employees of College.....	13
Botany .....	91	Engineering Design .....	75
Botany Group.....	41	Engineering Degrees .....	34
Breeds of Live Stock.....	58	Engineering Society .....	134
Buildings .....	18	English .....	82, 118
Calendar .....	3	Entomology .....	93
Carpentry .....	121	Entrance Conditions .....	30
Chapel Exercises .....	27	Equipment .....	18
Cheesemaking .....	61	Ethics .....	87
Chemistry .....	96	Euterpe Society .....	29
Chemistry Group.....	41	Excuses for Absences.....	32
Choral Union.....	29	Expenses, Students' .....	24
Christian Associations....	28, 133	Experiment Station.....	17, 57
Civil Engineering.....	48, 78	Experimental Engineering ....	74



	Page		Page
Faculty .....	5, 22	Latin .....	119
Farm .....	19	Law .....	117
Farm Crops .....	64	Library .....	20, 118
Farm Mechanics .....	64	Lighting .....	21
Farm Management .....	66	Literary Societies.....	28, 134
Floriculture .....	69	Living Arrangements of Stu-	
Food and Dietetics.....	70	dents .....	22
Forestry .....	168	Location of College.....	16
Forging .....	121	Logic .....	87
Free Hand Drawing.....	121	Machine Design .....	73
French .....	84	Machine Shop .....	73
Gas and Oil Engines.....	73	Master's Degree .....	35
General Science Course.....	50	Masonry and Foundations....	80
General Information .....	15	Materia Medica .....	99
Genetics .....	68	Mathematics .....	88, 120
German .....	83	Mechanical Engineering,	
Geodesy .....	80	.....	44, 91, 121
Geography, Commercial .....	115	Mechanics of Materials.....	74
Geology .....	65	Mechanical Drawing .....	73
Glee Clubs .....	134	Mechanism, Elements of.....	73
Graduates .....	136	Methods of Teaching.....	65
Grades .....	32	Military .....	27, 113
Gymnasium .....	20	Morrill Act .....	17
Handicraft .....	113	Museums .....	19
Hatch Act.....	17, 57	Music .....	100
Heating .....	21, 75	Mycology .....	92
Histology .....	95	Nature Study.....	94, 121
History .....	85, 119	Nelson Fund .....	17
History of Education.....	87	Operation of Creameries.....	61
Home Economics.....	42, 69	Oratorical Association....	29, 133
Home Nursing .....	70	Organizations, Student....	29, 133
Horseshoeing .....	62	Painting, Oil .....	112
Horticulture .....	67	Pharmacognosy .....	92
Horticulture Group .....	40	Pharmacy .....	54, 55
Household Economy .....	70	Pharmacy Club .....	29
Household Sanitation .....	70	Physical Culture .....	27
Hydraulics .....	79, 81	Physics .....	89, 120
Hygiene .....	70	Physiography .....	121
Income, Sources of.....	16	Physiology .....	44
Incalid Cookery .....	70	Philosophy .....	86
Irrigation .....	80	Piano Music .....	100
Inspection of Dairy Products..	60	Polyphase Currents .....	77
Instructors .....	10	Pomology .....	68
Jack Rabbit .....	30	Political Science .....	86
Kinematics .....	74	Postal Facilities .....	21
Laboratories .....	19	Power Transmission .....	78
Landscape Gardening .....	68	Preparatory Department .....	117
Languages, Modern .....	83	Principles of Education.....	88

	Page		Page
Psychology .....	87	Student Labor .....	26
Public Entertainments .....	27	Student List .....	150
Publications, Student .....	29	Student Organizations....	28, 133
Public Speaking .....	88	Student Publications .....	29
Railroad Engineering .....	80	Subject Defined .....	31
Regents .....	4, 21	Surveying .....	79
Reinforced Concrete .....	81	Taxonomy .....	92
Registration, Method of.....	31	Teaching of Home Economics.	71
Roads and Pavements.....	80	Terms and Vacations.....	3, 23
Schemes of Study.....	35	Time to Enter.....	22
Scholarships .....	26	Textiles .....	70
School of Agriculture.....	124	Testing of Power Plants.....	77
Semesters .....	23	Thermodynamics .....	74
Sewerage .....	80	Toxicology .....	100
Sewing .....	70, 122	Tuition .....	24
Shorthand .....	116	Tutoring .....	23, 33
Sociology .....	86	Typewriting .....	116
Soils .....	64	Uniforms, Military .....	24
Special Short Courses..	3, 35, 131	Vacations .....	23
Special Students .....	31	Ventilation .....	75
Statics .....	75	Veterinary Anatomy .....	62
Station Council .....	14	Veterinary Group .....	39
Steam Boilers .....	74	Veterinary Medicine .....	62
Steam Engineering .....	132	Veterinary Physiology .....	95
Steam Engines .....	74	Violin .....	100
Stock Breeding .....	58	Voice .....	100
Stock Feeding .....	58	Water Supply .....	80
Stock Judging .....	58	Wood Turning .....	121
Stresses in Framed Structures	74	Zoology .....	94, 121
Structural Design and Engi- neering.....	75, 81		



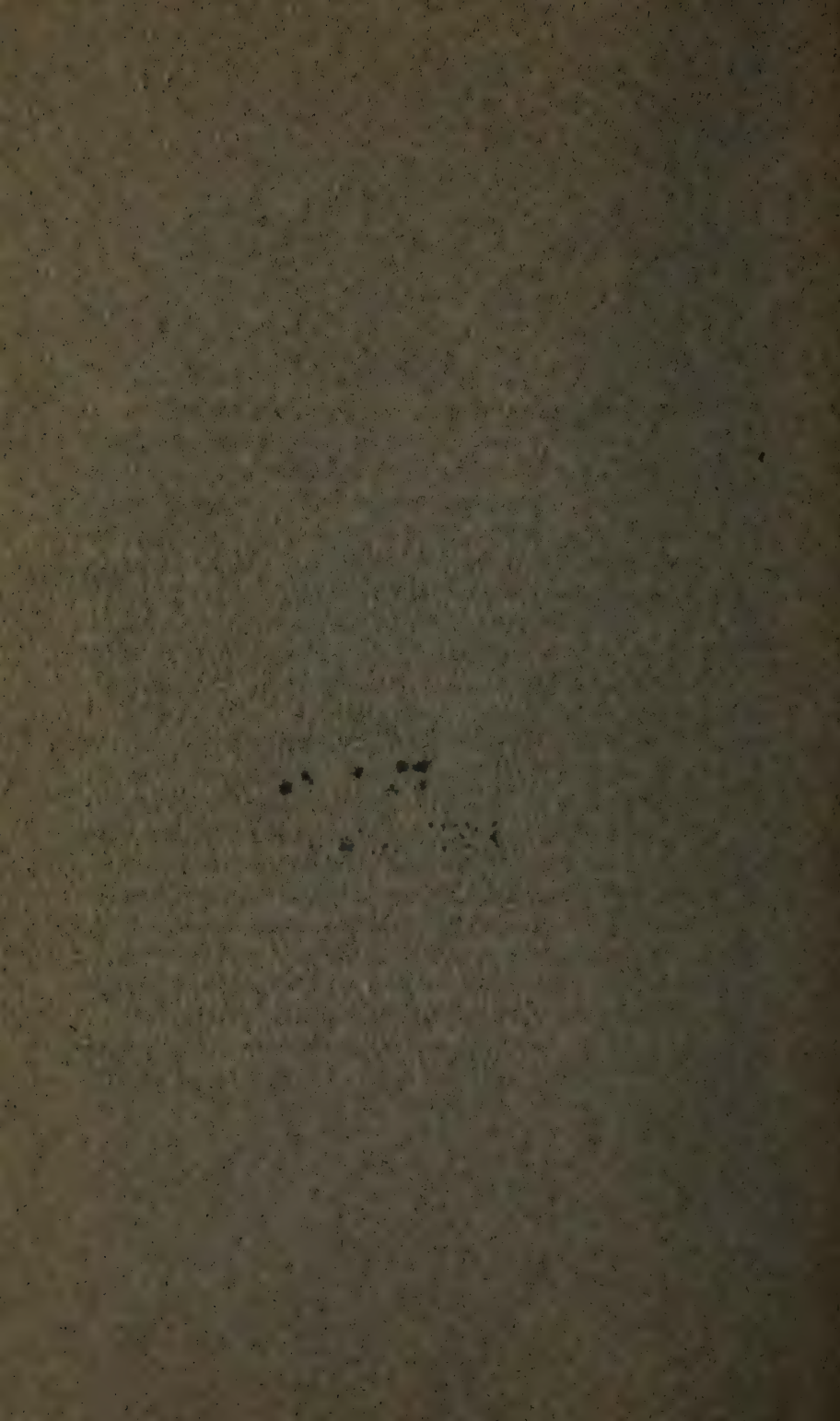






The State College of Agriculture and Mechanic Arts is located upon an eminence one mile from the business center of the city of Brookings, and four miles from the Big Sioux River. Brookings is situated on the Central Dakota Division of the Chicago and North-Western Railway, the Watertown branch of the same road making connection with the main line at this point. The city has a population of about three thousand five hundred thrifty, intelligent and hospitable people. It is lighted by electricity and has a complete water and sewer system, owned by the municipality. The streets are lined with trees and there are very few houses without well kept lawns, upon which are growing trees, beautiful flowering shrubs and plants. It has often been called the City of Homes. It is a city of clean morals. No saloon has been allowed within its limits for several years. In the general election of 1896 Brookings County was the banner county of the state in its vote against allowing intoxicating liquors to be sold in the state. In the spring election of 1898 the proposition to allow saloons within the city limits was defeated by a vote of three to one.

## LOCATION









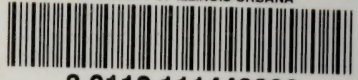








UNIVERSITY OF ILLINOIS-URBANA



3 0112 111443393